



USAID
FROM THE AMERICAN PEOPLE



**Sustainable Higher Education Research Alliances (SHERA)
Program Performance Report
Quarter 3 FY 2019 (April – June 2019)**

Cooperative Agreement No: AID-497-A-16-00004



Prepared for:

**Jalu Cahyanto, AOR
Education Office, USAID/Indonesia**

Prepared by:

**Institute of International Education (IIE)
July 30, 2019**

Table of Contents

List of Acronyms and Abbreviations	1
Executive Summary	3
I. SHERA University Partnerships/Centers for Collaborative Research.....	4
1.1 CCR Overview of Results	4
1.2 CCR Direct Mentoring and Other Support.....	5
1.3 CCR Monitoring CCR Monitoring	
1.4 CCR Activities – Key Highlights during the Reporting Period.....	9
a. CCR-ARI	9
b. SMART CITY	11
c. CDSR	12
d. NCSTT	12
e. ANBIOCORE.....	13
II. Other Program Activities that Contributed to SHERA’s Achievements.....	14
2.1 Stakeholder Engagement.....	14
a. USAID/Indonesia	14
b. Private Sector	14
c. Partnership Outreach	15
e. Communications.....	16
III. Operations.....	19
3.1 Limited Financial Review	19
3.2 Asset Management	19
3.3 Incremental Increase in Funds.....	19
IV. Challenges	19
4.1 Journey to Self-Reliance	19
4.2 IPB Management.....	20
4.3 Incremental Increase in Funds.....	21
4.4 CCR’s Operational and Program Capacity	21
V. Activities Anticipated for Next Quarter (July - September 2019)	22
5.1 MEL and Management Information System	22
5.2 CCR Monitoring	23
5.3 CCR Direct Mentoring	23
5.4 Stakeholder Engagement.....	23
5.5 HAKTEKNAS Commemoration.....	23
Annex I: SHERA’s KPI Achievements	24
Annex II: SHERA Quarterly Activity Record.....	30
Annex III: CCR Quarterly Activity Record	33
Annex IV: SHERA’s Media Coverage.....	53
Annex V: SHERA Success Stories	55

List of Acronyms and Abbreviations

ANBIOCORE	Animal Biotechnology and Coral Reef Fisheries
AMCHAM	American Chamber of Commerce
AOR	Agreement Officer Representative
BADORA	<i>Badan dan Orang Asing</i> / Foreign Corporate and Individual Tax Service Office
CCR	Center for Collaborative Research
CCR ARI	CCR for Acute Respiratory Infections
CDCS	Country Development Cooperating Strategy
CDSR	Center for the Development of a Sustainable Region
DGT	Directorate General of Taxation
DO	Development Objective
DRM	Domestic Resource Mobilization
F&G	Finance and Grants
G&C	Grants and Contracts
GDA	Global Development Alliance
GOI	Government of Indonesia
HEI	Higher Education Institution
IIE	Institute of International Education
IIEF	Indonesian International Education Foundation
IPB	<i>Institut Pertanian Bogor</i> /Bogor Agricultural University
IP	Implementation Plan
IR	Intermediate Result
IRB	Internal Review Board
ITB	<i>Institut Teknologi Bandung</i> /Bandung Institute of Technology
ITS	<i>Institut Teknologi Sepuluh Nopember, Surabaya</i> /Sepuluh Nopember Institute of Technology, Surabaya
J2SR	Journey to Self-Reliance
JICA	Japan International Cooperation Agency
KEMRISTEKDIKTI	Ministry of Technology, Research, and Higher Education
KPI	Key Performance Indicator
LFR	<i>Limited Financial Review</i>
MESP	Monitoring, Evaluation, and Support Program
MOU	Memorandum of Understanding
MIS	Management Information System
MEL	Monitoring, Evaluation, and Learning
MOOC	Massive Open Online Course
MSU	Mississippi State University
NCSTT	National Center for Sustainable Transportation Technology
PAR	Payment Advance Request
PFI	PT Proven Force Indonesia
PI	Principle Investigator
PIC	Person in Charge
PIRS	Performance Indicators Review Sheets
PSE	Private Sector Engagement
PPP	Public-Private Partnerships
R&D	Research & Development
RBM	Results-based Management
RSUD	<i>Rumah Sakit Umum Daerah</i>
SHERA	Sustainable Higher Education Research Alliances
SMART CITY	Scientific Modeling, Application, Research, and Training for City-centered Innovation and Technology
SSU	Savannah State University
ST&I	Science, Technology & Innovation

TOC	Theory of Change
TOD	Transit-oriented Development
UBB	<i>Universitas Bangka Belitung/University of Bangka Belitung</i>
UF	University of Florida
UGM	<i>Universitas Gadjah Mada/Gadjah Mada University</i>
UI	<i>Universitas Indonesia/University of Indonesia</i>
UIUC	University of Illinois, Urbana-Champaign
UMGo	<i>Universitas Muhammadiyah Gorontalo/Muhammadiyah University of Gorontalo</i>
UNAIR	<i>Universitas Airlangga/Airlangga University</i>
UNDANA	<i>Universitas Nusa Cendana/University of Nusa Cendana</i>
UNDIP	<i>Universitas Diponegoro/Diponegoro University</i>
UNG	<i>Universitas Negeri Gorontalo/National University of Gorontalo</i>
UNIBRAW	<i>Universitas Brawijaya/University of Brawijaya</i>
UNIPA	<i>Universitas Papua/University of Papua</i>
UNLAM	<i>Universitas Lambung Mangkurat/University of Lambung Mangkurat</i>
UNPAD	<i>Universitas Padjadjaran/Padjadjaran University</i>
UNPATTI	<i>Universitas Pattimura/University of Pattimura</i>
UNRAM	<i>Universitas Mataram/University of Mataram</i>
URI	University of Rhode Island
UNDP	United Nations Development Programme
UNS	<i>Universitas Sebelas Maret/Sebelas Maret University</i>
UNSRI	<i>Universitas Sriwijaya/Sriwijaya University</i>
UNSYIAH	<i>Universitas Syiah Kuala/ Syiah Kuala University</i>
UNUD	<i>Universitas Udayana/Udayana University</i>
UP	<i>Universitas Pertamina/Pertamina University</i>
UTS	<i>Universitas Teknologi Sumbawa/Sumbawa Technology University</i>
USAID	United States Agency for International Development
USG	United States Government
UTP	<i>Universiti Teknologi Petronas/Petronas Technology University</i>
VAT	Value Added Tax

Executive Summary

From April 1 – June 30, 2019, the Institute of International Education (IIE) completed activities and milestones necessary to implement the Sustainable Higher Education Research Alliances (SHERA) program (Cooperative Agreement AID-497-A-16-00004). SHERA aims to foster linkages between Indonesian higher education institutions (HEI) and U.S.-based universities, and across diverse Indonesian universities to enhance the research capacity of Indonesian HEIs in science, technology, and innovation (ST&I), improve the enabling environment for quality research, and promote access to research and professional development opportunities for women. By establishing Centers for Collaborative Research (CCR) within top Indonesian universities, SHERA, in collaboration with the Indonesian Ministry of Research, Technology, and Higher Education (Kemristekdikti), bring together Indonesian and U.S. scholars to conduct world-class research within priority research areas.

SHERA had a number of achievements during this reporting period including:

- 42 international journal articles and 120 international proceedings published, totaling 153% of the program's total target for the fiscal year
- 58 presentations at international conferences carried out by SHERA scholars (in which 43% of them were women scholars)
- 21 Indonesian scholars visited U.S. universities and 19 U.S. scholars visited Indonesian universities for program activities
- 114 Indonesian scholars (37 male and 77 female) received ongoing mentoring from U.S. university partners, 161% beyond the target for this fiscal year

During the reporting period, IIE renewed its focus on SHERA's public-private partnership (PPP) strategy. Following the previous quarter's PPP mapping exercise for Institut Pertanian Bogor (IPB), Universitas Padjadjaran (UNPAD), Institut Teknologi Bandung (ITB), and Universitas Gadjah Mada (UGM), SHERA's PPP consultant has developed an initial plan of potential partnerships that could be developed with the four CCRs, as well as potential challenges. The final version of these plans will be shared with SHERA once the consultant concludes his exercise with Universitas Indonesia (UI).

On May 21, 2019, SHERA also met with AMCHAM Education Committee members and Thomas Crehan, USAID HCP Director. USAID presented the USAID Partnership Division and J2SR and highlighted collaborative action through collaborative research, while SHERA presented on the program's objectives, CCR work, and the PPP approach for post-project sustainability. The AMCHAM Education Committee noted that the intervention SHERA is implementing is timely and necessary given that it is the first intervention of its kind in Indonesian HEIs, and mentioned that SHERA should further be linked with the GOI's Industrialization 4.0 Initiative. While the AMCHAM participants were not themselves private sector representatives, they did offer to distribute SHERA's information to all members listed in other taskforces connected to the private sector

Another key feature of the quarter was SHERA's sustainability review. In April, USAID informed SHERA that its Monitoring and Evaluation Support Program (MESP) would conduct a sustainability review of the institutional research partnership under the SHERA program. On June 26th, MESP reported its preliminary findings to USAID and SHERA. The findings noted that sustainability planning needed to become more of an explicit and functionalized part of SHERA implementation and CCR organization. As a result, the SHERA team has coordinated a strategic meeting with CCR directors and GOI officials to discuss the report's findings and critically plan program activities. The meeting will take place in Semarang on August 1-2, 2019.

On June 4, 2019, USAID sent IIE the summary of its Limited Financial Review (LFR). This summary included USAID observations and recommendations for SHERA based on the review it had conducted the previous month. USAID examined and identified some areas, namely internal controls, that should be addressed by SHERA. As per USAID protocol, SHERA will respond to the recommendations within

60 days (August 4, 2019). USAID will then conduct a follow-up desk review after receiving SHERA's remarks and may coordinate another site visit, if necessary

As a followon to the concerns expressed about IPB's performance in previous reports, the Director of USAID Programs at IIE, SHERA Program Director, and two managers visited IPB in April. The goal of the meeting was to find solutions to its management challenges. The IIE team with the Vice Rector of Research and Partnership, the Director of International Partnerships, and the Animal Biotechnology and Coral Reef Fisheries (ANBIOCORE) Program Director. As a result, all parties agreed that IPB would report its performance every two weeks to SHERA through an Improvement Development Plan. Based on the submission of that form, SHERA provides feedback and next steps where applicable.

Lastly, IIE received Modification No. 3 from USAID in June. The modification provides an incremental funding increase of \$2,089,870.58, taking the total obligated amount from \$7,388,912.26 to \$9,478,782.84. In July, IIE plans to subsequently modify its subaward agreements with the CCRs to increase their obligations. This will allow the CCRs to continue their program activities, as they have spent out the majority, if not all, of their current obligations. SHERA will allocate the same amount to four of the CCRs, apart from ANBIOCORE, as it still has a remaining obligation to spend out. Based on guidance received from USAID, the increased obligation is intended to support IIE and IIEF program and operational expenses through September 2020, in addition to the five CCR's programmatic and operational expenses.

I. SHERA University Partnerships/Centers for Collaborative Research

I.1 CCR Overview of Results

In this reporting period, 162 articles were published, consisting of 42 journal articles and 120 proceeding articles. The total amount of peer-reviewed, scientific publications resulting from U.S. government (USG) support for research under the SHERA program was 82 publications, since three proceeding articles is equal to one journal article. Most of those publications were contributed by CCR Country Development Cooperating Strategy (CDSR) and CCR Scientific Modeling, Application, Research, and Training for City-centered Innovation and Technology (SMART CITY). CCR SMART CITY had 13 article citations, with 17 out of 162 article publications as its total ratio of citations. 58 scholars also participated in international conferences and of that number, 43% of them were women scholars.

A total of 304 scholars participated in CCR collaborative research, of which 20 scholars participated in U.S. scholar-exchange activities. 12 CDSR scholars participated in activities at the University of Colorado Boulder and 8 CCR for Acute Respiratory Infections (ARI) scholars participated in activities at the University of Colorado Denver. While most of the scholars did not travel to the U.S., 114 of the Indonesian scholars received ongoing mentoring from U.S. university partners. This mentoring was in large part carried out on an in-person basis, except for eight CCR ARI scholars whose mentoring was conducted virtually. As of June 2019, 12 capacity building activities were conducted by the CCRs. 402 Indonesian scholars participated in activities facilitated by 18 U.S. Scholars for CCR ARI and SMART CITY. It should be noted that the total number of Indonesian scholars included above may include some double-counting, as some scholars may have participated in more than one activity.

This quarter saw seven institutions improve their research management and policies, as well as their administrative systems. These institutions included the CCR National Center for Sustainable Transportation Technology (NCSTT), CCR ARI, SMART CITY, as well as four SMART CITY Indonesian affiliate institutions. The CCRs also created 152 knowledge products in a variety of mediums, including research reports, modules, booklets, and YouTube videos.

Lastly, the total number of CCR affiliate institutions increased from 43 to 44 institutions, as Universitas Madura was added to CCR ANBIOCORE under the supervision of Universitas Brawijaya, Malang in

the veterinary research cluster. Of the affiliate institutions, 10 Indonesian institutions obtained external resources for their joint research projects. 21 Indonesian academic institutions were engaged in SMART CITY joint research projects, 12 hospitals in five provinces were engaged in ARI joint research projects, and five Artificial Insemination Centers in five provinces were engaged in ANBIOCORE joint research projects.

1.2 CCR Direct Mentoring and Other Support

SHERA carried out several activities to ensure direct mentoring was in place and ongoing for the CCRs. The activities were largely focused on building capacity development and providing technical support for the new Management Information System (MIS) web application, which was launched this quarter. The activities were also designed to streamline and enhance current practices, such as impact story reporting. Further information on each activity can be found below:

Monitoring, Evaluation, and Learning (MEL) Training

Held in May, this MEL training sought to:

1. Enhance CCR MEL Specialists' knowledge and skills on the newly-developed MIS web application and their ability to perform data entry for events, mentorship logbook, and research logbook;
2. Ensure that the MIS web application's database is correct and instruct MEL Specialists on how to correct any errors that occur; and,
3. Improve CCR MEL Specialists' knowledge and skills on how to better identify impact for their respective CCR's outcomes.

Key lessons learned from this training:

- SHERA's MEL team received valuable input from the CCR MEL Specialists on how to improve the quality of MIS web application in regard to the data entry process, further ensuring the validity of the data. The team then took immediate actions on site and post-event to ensure this feedback was sufficiently accommodated. SHERA also hired temporary, short-term daily workers to perform data entry for all submitted data between FY2017 and FY2019.
- In their narratives, CCRs focused on processes rather than tangible changes and how the CCRs had contributed to those changes. The SHERA MEL team emphasized the need for stories with clear narratives. The SHERA and CCR MEL team agreed that in moving forward, they will work together to continuously review and polish existing stories that have significant change elements before creating new narratives.

MEL Information System Development

The MEL information system progressed rapidly. In addition to the capacity building provided for the CCR MEL Specialists, the data entry processes for activity reports, research logbooks, and mentoring logbooks were performed. The system now features data backdated as far back as FY17. To ensure that the data was stored correctly in a timely manner, SHERA hired temporary, short-term daily workers to perform data entry for all data between FY2017 and FY2019. Ten undergraduate students, largely recruited from SHERA's HEI partners, participated in the program and inputted backdated and current data into the new MIS web application system. As a result, the activities reported during this quarter utilized data extracted from the MIS web application.

Monitoring Impact Stories

SHERA developed a mechanism flow for impact story data collection using the Most Significant Change (MSC) approach. The MSC is a method of identifying impact through stories, where the most significant stories are expected to be acknowledged as SHERA's impact stories. Since SHERA is focused on building the capacity of Indonesian HEIs and how their research can be utilized and sustained, the MSC approach is particularly useful for identifying impact within the context of SHERA. This mechanism flow allows CCRs to select stories that they believe have potentially significant change for their respective programming, as shown in the diagram below:

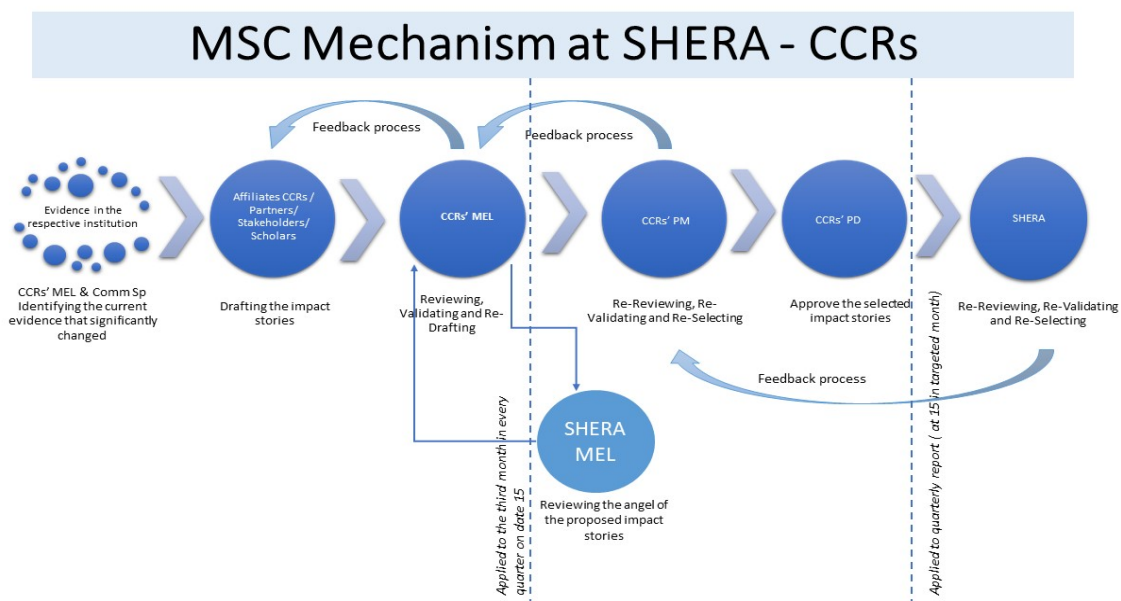


Figure 1: The Mechanism of Impact Stories

As detailed in the diagram, affiliate partners will draft and submit impact stories to their respective CCR's management team, who will then review and validate the story. They will decide which story shows MSC. During this process, CCRs will involve the SHERA MEL team to review the accuracy and effectiveness of the selected story angle. Over time, this data will also be utilized as a monitoring tool by the SHERA Communication and Outreach Specialist to better gather and detail SHERA's impact to targeted stakeholders.



Figure 2: MEL specialists from all CCRs discussing the MSC mechanism flow with the SHERA team

MEL Virtual Mentoring

On June 19, the SHERA MEL team held a virtual mentoring session that was attended by each CCR's MEL Specialists. Topics included:

- Using feedback from May reporting the SHERA MEL team learned that all of the CCRs' MEL focal points were able to operate the MIS platform very well. Minor feedback was received related to the data field explanation and research structures. In response, the SHERA MEL team conducts daily monitoring of the system to ensure it is working correctly.
- Presentation on annual MEL online survey to collect data for indicator 3.1.2 —This survey is intended to gather information on how many scholars are increasing their usage of external research engines. The survey needs intensive cooperation from the CCRs to communicate, share, and remind the CCRs' scholars to respond in a timely manner.
- Updated formats for the KPI tools in the SHERA scientific publication booklet —With the goal of better capturing regularly-updated data and the sustainability KPIs, the SHERA MEL team embedded and integrated the new data template into existing data recording and reporting tools.

MEL Online Survey to Collect Data for Indicator 3.1.2.

The MEL online survey is an annual survey conducted to collect data for Indicator, 3.1.2., which is the “Number of scholars at CCR institutions with increased access to external resources and academic research engines.” The survey has been carried out since FY18. This survey holds a very significant role in measuring the extent to which SHERA's scholars use external resources access in carrying out research funded by the U.S. Government. These external resource includes websites, books, encyclopedias, and journals.

For data collection, the SHERA MEL team put together an online, quantitative questionnaire using Google Forms. They then coordinated with each CCR MEL Specialist on the implementation of the survey and encouraged the CCR MEL Specialists to communicate intensively with their researchers, regularly reminding them to respond to the survey. The timeline for the survey's development, dissemination, and collection by the SHERA team is outlined below:

Day/Date	Activities
03 June 2019	Development of Terms of Reference
10 – 12 June 2019	Development of online questionnaire
13 June 2019	Review by SHERA Program Director
17 June 2019	Revised online questionnaire
19 June 2019	Dissemination of survey information to CCRs
24 June – 31 July 2019	Online data collection process
01 - 09 August 2019	Data cleaning and clarification as necessary
12 - 16 August 2019	Analysis and report writing
19 – 23 August	Review Result
26 August 2019	Submission of final report for the FY19 annual report
28 August 2019	Result Dissemination to CCR

SHERA will use the findings to fill out the achievement for Indicator 3.1.2 to be included in FY19 annual report. The findings will also be utilized when SHERA holds discussions with the CCRs about scholar support, better enabling the CCRs to conduct joint research projects.

I.3 CCR Monitoring

On April 1-7, IIE conducted in-depth monitoring on the following three CCR affiliates: University of Brawijaya (UB), Malang, and University of Udayana (UD), Bali, as ANBIOCORE affiliates; and, UD, Bali, as a CCR SMART CITY affiliate. Focusing on these affiliates for this period was a result of discussions with USAID on the need to have more information on how the lead CCRs were performing their

activities. Additionally, the SHERA team particularly wanted to learn more about the fish research area carried out by ANBIOCORE. The findings of the monitoring are below:

CCR ANBIOCORE – University of Brawijaya, Malang

In the group discussion led by SHERA, the Dean of Husbandry Faculty represented UB, Malang as an affiliate of the ANBIOCORE research consortium. Through his position at the university, the Dean provided local support for the institution's initial involvement in the ANBIOCORE consortium. As an active participant in the consortium, he mentors scholars in the research field of genomic animal reproduction and production.

The Dean noted that the institution has learned a significant amount from the CCR through implementing the CCR's work design. With the goal of publishing an article in a world-class journal, they have established a clinical journal team, four research groups, and have invested their local funds to develop bio-molecular laboratories. As a result, they currently have five journal manuscripts pending, one of which has been submitted to the international publishing index Scopus. They also intend to collaborate with the private sector to support the CCR's sustainability at UB. The Dean commented that two challenges have been the limited assistance of US-affiliate MSU, as well as unclear procedures from the lead CCR institution, IPB.

CCR ANBIOCORE – University of Udayana, Bali

In the group discussion led by SHERA, the Dean of Maritime and Fishery Faculty represented UD, Bali as an affiliate of the ANBIOCORE research consortium. The Dean, an active scholar and principal researcher in one of the three research groups, ensures his institution's research administration and management compliance for the CCR. UD, Bali currently has two research focus, the sea cucumber and the bleaching coral, and the affiliate has targeted both topics for journal submission and international conferences. The Dean reported that the following significant changes have occurred for ANBIOCORE-UD:

- Data expansion and research developments within its research focus
- Improved and expanded research environment within the institution
- Increased participation in the international journal publication index Scopus
- Increased research networking

Since SHERA has provided the institution with its first opportunity to collaborate with a US institution, the University of Rhode Island (URI), this affiliate feels the experience could greatly support its goal of academic accreditation. The in-house trainings led by URI at UD have not been started at this point, nor is there an Indonesian scholar exchange from UD to IPB. For improved affiliate participation and compliance, further grant and finance training is needed, whether it be provided by the SHERA team or IPB.

CCR SMART CITY – University of Udayana, Bali

In the group discussion led by SHERA, the Second Vice Rector of UD, Bali represented the institution as an affiliate of the ANBIOCORE research consortium. In its second year in the consortium, this affiliate has increased its management of collaborative research with other affiliates. Overall, the affiliate feels that the research environment has improved and expanded under the SHERA program. It has provided open access to research facilities, networking with private, academic, and governmental sectors (both national and international), and has established a research partnership with stakeholders at the municipality level.

Based on the discussions had in this meeting, the SHERA team learned that it should further incorporate how the research consortiums work when drafting and implementing its management plan. More specifically, the affiliate emphasized that their work spans multiple sectors, is multi-disciplinary, and involves multiple affiliates. As such, this affects its planned activities, output/outcomes, management compliance, and equal opportunity to research grants. This is a unique situation as UD

is involved with two different CCRs (SMART CITY and ANBIOCORE) and each Lead CCR has its own collaborative research design and standard operational procedures.

I.4 CCR Activities – Key Highlights during the Reporting Period

a. CCR-ARI

This CCR succeeded in fostering further research collaboration between one of its U.S. affiliates, the University of Colorado Denver (UCD), and the following four Indonesian HEIs: Universitas Syiah Kuala, Universitas Lambung Mangkurat, Universitas Mataram, and Universitas Pattimura. The Memorandums of Understanding (MoU), which were signed at the end of May, now allow for greater research collaboration on:

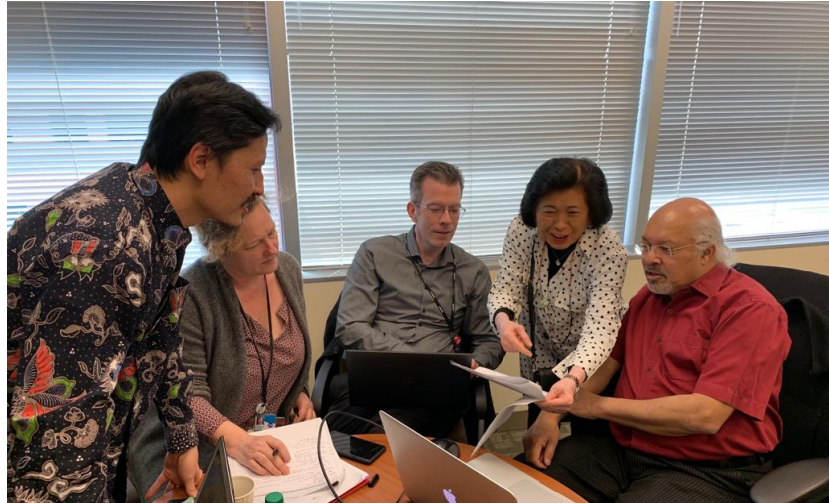


Figure 1: Prof. Eric Simoes - PI UCD (far right) and Prof. Cissy Kartasmita - Program Director of CCR ARI (two from right) were discussing future collaboration among CCRARI member

- Indonesian Eclampsia and Pre-Eclampsia Registry (MoU with UNPAD);
- Genetic associations between the Pfk 13 gene mutation and the Artemisinin resistance phenotype in Plasmodium falciparum isolates from Indonesia (MoU with UNSYIAH);
- Molecular profiling of Neonatal Sepsis using saliva with Fourier Transformation Infrared Spectroscopy (MoU with ULM);
- Control of Hypertension as a risk factor of stroke by building a monitoring system using mobile phone application in Ambon City, Indonesia (MoU with UNPATTI); and, Stunting (MoU with UNRAM).



Figure 2: CCRARI visiting UCD with all affiliates, follow up with MOU signing between them.

This quarter also marked the CCR ARI's commencement of the following planned studies:

- **Surveillance Study-** This research is a part of CCR ARI's broader Burden of Disease and Influenza Surveillance, where it serves as a baseline reference for future studies and evaluates the influenza disease prevention program specifically designed for healthcare workers in hospitals. The research data collected will be used as an epidemiology database for influenza disease surveillance strategies in the wider community. During this quarter, 93 patients were recruited at Sukajadi Primary Health Care as target subjects for the influenza virus surveillance.
- **Hospital Mortality Study-** This study is intended to estimate the mortality and the burden of diseases in participating hospitals, which will then provide valuable insights and help guide public health and healthcare policies. After receiving ethical clearance released by Universitas Padjadjaran in March 2019, this study began in surveying the hospitals in the surrounding Bandung area in April. Data collection for Hasan Sadikin Hospital was carried out in June, while the three other participating hospitals (Soreang, Majalaya and Al-Ihsan hospitals) are waiting for study permits in their respective hospitals. Their participation is expected to begin in July 2019. CCR ARI also plans on carrying out the study through its affiliates UNSYIAH, ULM, UNRAM and UNPATTI. Preparation is well underway and initial virtual coordination meetings are planned for early next quarter.
- **Post Discharge Study-** This study is a part of the Burden of Disease study and it aims to collect post-discharge information on hospital patients. The information from this study will inform the impact of diseases by measuring any illnesses post-discharge. Data collection was gathered by phone and text messaging, and data was then inputted into the RedCap database, which is a browser-based, metadata-driven software solution and workflow methodology for designing clinical and translational research databases.
- **Immunogenicity Study-** This study aims to assess and characterize the immunogenicity of the Trivalent Influenza Vaccine over a 12-month period. Serologic titer observation is conducted before immunization, then at one month, three months, nine months, and finally 12 months after immunization in adolescent, elderly and adult healthcare workers. The

findings of this research will help to better determine a course of treatment for influenza. CCR ARI has recruited 150 subjects from RSHS Geriatric Clinic and 100 subjects from the community. Research permits from Hasan Sadikin Hospital have been obtained, vaccines are available, and human resources are on standby. The CCR ARI team is optimistic that the implementation of the study will be started as scheduled by early July 2019.

b. SMART CITY

CCR SMART CITY successfully conducted a new round of selections for the 2019-2020 Consortium Research Fellowship. This fellowship provides opportunities for researchers (both at the lead and affiliate level) to carry out collaborative research activities. For this round, SMART CITY required that collaborative research be a key feature in the research proposals submitted and that each research team consist of 30% women researchers (as stated in SMART CITY's research policy). In April 2019, the team in Jakarta reviewed and assessed 14 proposals, of which eight were approved. Besides researchers from the lead institution, Universitas Indonesia (UI), researchers selected to participated come from Universitas Padjadjaran, Universitas Diponegoro, and Universitas Udayana. These HEIs are also partnered with U.S. researchers at Harvard University, University of Washington, Purdue University, University of Illinois at Urbana-Champaign, University of Florida, and Alabama A&M University. Team leaders from the respective teams were invited to a briefing in late April on the administrative requirements of the Fellowship. In this briefing, they also signed the contract agreement to kick off the one-year research program.



Figure 3: SMARTCITY reviewing the submitted proposals for the 2019-2020 Consortium Research Fellowship.

SMART CITY has also progressed in developing the Smart Land Surveillance System and Adaptive Traffic Management System prototypes. The project involves the Advanced Computing Laboratory of the Faculty of Computer Science of UI and PT Pangripta Geomatika (PT PGI). The surveillance system is an automated system using LIDAR (Light Detection and Ranging) to estimate the value of land and buildings. The output will then be synchronized with construction permits to identify any tax violation and mass or land appraisal.

Its Adaptive Traffic Management System, on the other hand, is a solution to congestion problems in Indonesia. It has been developed to adjust traffic light in a region based on real-time traffic conditions. The traffic light is set based on the number of vehicles in a region to reduce the possibility of congestion. Current development includes ongoing feasibility study of the system, which requires CCTV with 360° coverage and fiber optic network, as well as computerized traffic control box.

Additionally, SMART CITY opened a collaborative opportunity with Universitas Maarif Hasyim Latif (located in Sidoarjo, East Java). This university had established an independent consortium for journal articles and international conferences with other Indonesian universities but the consortium was slow-moving as it faced challenges in producing high-quality manuscripts to qualify for journals and international conference. Therefore, the consortium expects that future collaboration with the SMART CITY team will help them increase their scholars' capacity, particularly in academic research writing.

Lastly, SMART CITY is exploring potential collaboration with Mappi Regency, which is located in the southern part of Papua, to improve the Regency's urban and economic development. The SMART CITY team is looking forward to discussing this opportunity in the next quarter, as they can provide experts to study spatial planning and capacity building for the local government staff in the Regency.

c. CDSR

During this period of reporting, CDSR produced 22 peer-reviewed scientific publications. Of that total, 20 were journal articles that are now indexed in Scopus. This publication rate is the highest yet amongst the CCRs. As part of its research activities, CDSR also conducted algae experiments at an open pond in Yogyakarta. These experiments are examining and developing algae's role in sustainable photovoltaics. Following its Implementation Plan, CDSR then expanded the experiments to two different places in Bangka Belitung and Gorontalo. There, two CDSR affiliates will take care of the pond and involve nearby communities. CDSR's research on the creation of an algae wall (see Annex V: SHERA Success Stories), has also been presented in Australia and published in a sustainable energy journal. This raised the profile of their work and the scholars have requested the opportunity to expand the research into a prototype, to then test on a building. Until further funding is received from USAID, that proposal remains on hold.

NCSTT

The NCSTT team has focused on increasing their scholars' capacity in terms of scientific writing; accordingly, they held a two-day workshop in Palembang that was attended by researchers from Universitas Sriwijaya, Universitas Sam Ratulangi, Institut Teknologi Kalimantan, and Institut Teknologi Bandung. Out of that workshop, the participants produced 23 article drafts, which they aim to publish in the International Journal of Sustainable Transportation Technology. The NCSTT team also served as a primary resource during the knowledge-sharing activity held at @america. This session was a valuable opportunity for NCSTT to reach out to the wider public audience to promote sustainable transportation.

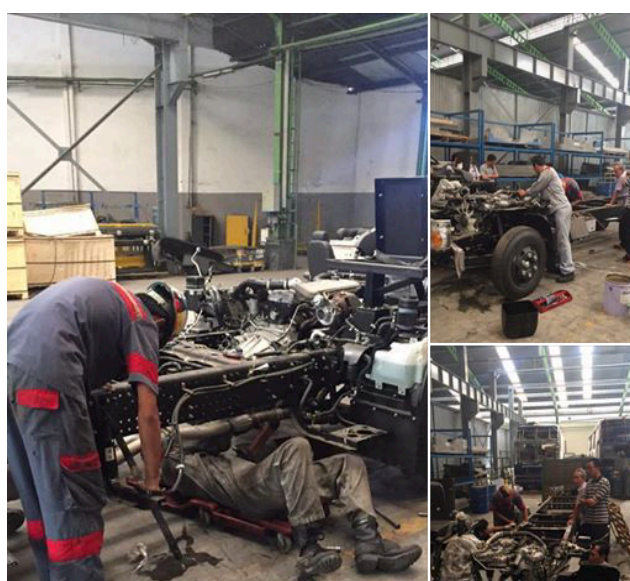


Figure 4: NCSTT's affiliate, Universitas Diponegoro, collaborating with a local bus manufacturer.

NCSTT has also continued to expand their partnerships in the private and public sectors. ITB, UNDIP, and UNS have signed MoUs with several transportation industries, while UNS established a MoU with the Agency for Assessment and Implementation of Technology (BPPT) on Light Rapid Transportation (LRT) development. UNDIP itself also established a MoU with the State Electricity Company on potential electric vehicle development. In April, NCSTT carried out separate private partnership's meetings with PT. LEN and PT. Trans Jakarta to discuss the leverage for the E-Bus and E-Trike prototyping process. The meeting with PT. LEN focused on the buses' specification details, such as the battery type and its packing, battery capacity and its on-board charger. With PT. Trans Jakarta, they discussed the company's road map and timeline for a potential bus test session.

Lastly, as a collaborative research center, NCSTT is now working to establish a research partnership with Malaysia's Universiti Teknologi Petronas on electric vehicle uptake, in addition to several Japanese universities. They hope this new potential new partnership will include research activities and student exchanges.

d. ANBIOCORE

In May, the CCR ANBIOCORE team carried out data collection for fish ecology, eDNA, fish gut content, and oceanography data in Misool, Raja Ampat, Papua. The activity was intended to investigate fishing impacts and innovation strategies in fisheries biodiversity management. This is a key component in food networks that support important species in reef fisheries ecosystems coral, and a food network ecosystem model with an Ecosystem Approach Fisheries Management



Figure 5: Subhan Beginner, ANBIOCORE's researcher, collecting samples and data during the Misool expedition.

(EAFM) approach. The activity was the result of collaborative research between IPB, Universitas Papua, and URI. These samples from the field were then brought to IPB's Laboratory of BIODIVS, part of the Faculty of Fisheries and Marine Sciences, for further processing and analysis. The Veterinary Research Cluster also collaborated in animal biotechnology research with the Indonesian Institute of Sciences (LIPI) and Taman Safari Indonesia. LIPI provided support for CCR ANBIOCORE's scholars by processing samples for in-vitro fertilization and semen analysis for local bulls. Taman Safari Indonesia assisted the team by providing semen and blood samples of Banteng (*Bos javanicus*).

CCR ANBIOCORE is also proactively looking for sustainable collaboration opportunities outside the academic sector, including the government, private sector, and local communities. Further collaborative opportunities would contribute to their efforts in maximizing livestock production and identifying key food web components for coral reef fisheries. During this reporting period, they individually met with Balai Uji Standar Karantina Ikan, Pengendalian Mutu dan Keamanan Hasil Perikanan (BUSKIPM) and the USAID SEA Project. These potential collaborations would help them in their data collection efforts, especially for their fisheries project. CCR ANBIOCORE hopes to finalize an agreement with BUSKIPM in the following quarter.

II. Other Program Activities that Contributed to SHERA's Achievements

2.1 Stakeholder Engagement

a. USAID/Indonesia

In April, David Simpson, Director of USAID Programs at IIE, met with USAID while in Indonesia to discuss SHERA program implementation. During this time, Thomas Crehan, USAID Human Capital and Partnership (HCP) Director, noted that SHERA's publications would be better served if they were targeted towards an audience that was broader than academia. He asked SHERA to produce a booklet for each CCR with the names of the scholars, their papers, as well as what they hope to achieve, in layman's terms. This will then highlight the work of each scholar and CCR, as well as their greater impact on Indonesia. The SHERA Communication Specialist worked with the SHERA MEL Specialist and a consultant to develop an approach and timeline for creating the booklets. After establishing a timeline, they held a training in Bandung with the five CCRs' MEL and Communication teams in mid-May to discuss and draft content. The first draft of the booklet is due from the CCRs in July and the finalized copy is scheduled for October 2019.

On June 14-17, Maxmillian Angerholzer III, IIE Executive Vice President, and Edith Cecil, IIE Senior Vice President, visited Jakarta to attend the Humphrey Fellowship Program's 40th Anniversary celebration. During their trip, they met with USAID to discuss IIE's implementation of the Mission's projects, including SHERA. As a result of their meeting and discussion of J2SR, the SHERA team is continuing to make strategic plans with the CCRs on how to reconfigure activities based on limited funding from USAID. These plans take into consideration the results of the Sustainability Assessment conducted by MESP.



Figure 8: Max Angerholzer, IIE Executive Vice President (center) and Edith Cecil, IIE Senior Vice President (center) visiting SHERA

b. Private Sector

In line with the Journey to Self-Reliance (J2SR), IIE will continue to support PPP efforts to thereby increase the CCRs' sustainability. This will primarily be done through individual exploratory partnership meetings and continued mapping exercises with UGM. Along with exploring MoUs between CCRs and their potential partners, SHERA's PPP consultant in Jakarta also approached AMCHAM members and introduced SHERA's research activities as a means of proposing potential collaboration opportunities with CCRs.



Figure 6: USAID and SHERA discussing collaboration

On May 21, 2019, SHERA met with AMCHAM Education Committee members and Thomas Crehan, USAID HCP Director. USAID presented the first session, which focused on the USAID Partnership Division and J2SR and highlighted collaborative action through collaborative research. SHERA then presented the second section on the program's objectives, CCR work, and the PPP approach for post-project sustainability. The AMCHAM Education Committee noted that the intervention SHERA is implementing is timely and necessary given that it is the first intervention of its kind in Indonesian HEIs. A few members also mentioned that SHERA should further be linked with the GOI's Industrialization 4.0 Initiative. While the AMCHAM participants were not themselves private sector representatives, they did offer to distribute SHERA's information to all members listed in other taskforces connected to the private sector. SHERA's PPP will continue to work with AMCHAM to take next steps with these new contacts.



Figure 7: Thomas Crehan (right), USAID Indonesia HCP Director, presenting the USAID Education program to AMCHAM.

In the U.S., IIE's PPP specialist continues to work with the CCRs on drafting their introductory PSE letters. Once these letters are finalized, IIE's Head of Corporate and Foundation Programs will send these letters to potential private sector and foundation contacts and the individual CCRs will lead the next steps of collaboration.

c. Partnership Outreach

In April, researchers from CDSR-UGM and the University of California, Davis (UCD) met to develop a MoU. A formalized partnership would allow them to collaborate on research within their joint fields of interest, with the possibility of future collaboration in other areas as opportunities arise. In mid-June, the UCD International Training and Education Outreach Manager visited CDSR – UGM and met with the Director of International Cooperation to finalize and sign the MoU. The partnership will officially launch in Jakarta in mid-August through a ceremony attended by representatives from USAID/Indonesia, the U.S. Embassy in Indonesia, the Indonesian Ministry of Research, Technology and Higher Education, and both universities.



Figure 8: UC Davis's representative (center) in discussion with CDSR and UGM International Office representatives

d. USAID Sustainability Assessment

USAID/Indonesia requested the USAID Monitoring Evaluation and Support Program (MESP) to conduct a sustainability assessment of SHERA to determine how the CCRs' research capacities supported by SHERA can be sustained beyond the current USAID funding. The assessment addresses the following questions:

- What are the key factors that will enable the five existing SHERA partnerships (CCRs) to continue effectively beyond the terms of current USAID support?
- How effectively are the capacity and commitment of system stakeholders aligned to ensure sustainability of the CCRs once donor funding ends?
- What lessons and best practices can be identified regarding effective partnership establishment, as well as the administration and operation of the partnerships?

USAID ADS 201's definition of sustainability was used, focusing on the ability of a local system to produce the desired outcomes over time. Assessing the sustainability of a local system requires an approach that considers linkages between near-term choices and long-term consequences. This was achieved by examining both the technical and social aspects of the local system. Technical aspects were assessed using factors based on the Sustainability Evaluation Checklist, while social aspects were assessed using Oshry's framework of total system power. Such a system view helped the team to assess the capacity and commitment of local institutions to sustain SHERA outcomes, linking sustainability to J2SR considerations.

Data were collected and analyzed using semi-grounded methods, which are effective in analyzing systems-based change and innovation. Data sources included documents, key-informant and group interviews, and an online survey of SHERA scholars. A total of 74 interviews were held (key informant and group), while the survey of SHERA scholars secured 61 respondents.

In its April meetings with USAID, SHERA also learned that MESP would conduct a sustainability review of the institutional research partnership under the SHERA program. On June 26th, MESP reported its preliminary findings to USAID and SHERA. It found that sustainability planning was needed to become more of a functionalized part of SHERA and CCRs' organizational planning. As a result, the SHERA team has coordinated a strategic meeting with CCR directors and GOI officials to discuss the report's findings and critically plan program activities. The meeting will take place in Semarang on August 1-2, 2019.

e. Communications

SHERA's program communications and outreach activities are directly tied to the program's objectives and are designed to further support them. While communications have been executed across several mediums, SHERA has focused on its digital communications and public outreach efforts.

Video Production

As part of its direct mentoring to CCRs, SHERA produced videos with CDSR and ANBIOCORE. CDSR worked closely with SHERA's Communication Specialist to create four videos on its research activities. SHERA helped CDSR with the story board through the framing, video editing, and final production. One of the four videos has been published online, while the others will be published in the next quarter. CDSR's video on biorefinary solar power in the Belitung Islands can be found [here on YouTube](#). SHERA also assisted ANBIOCORE in its efforts to document its data collection and sample gathering activity in Misool, Papua. This activity was part of a research collaboration between IPB, Universitas Papua, and URI. The video on sample and data collection can be found [here](#), while their timelapse video on laboratory activities at IPB's Faculty of Fisheries and Marine Laboratory in Bogor can be found [here](#).



Figure 9: ANBIOCORE's data collection activity in Misool, Papua

USAID SHERA's Talk Show: Solution for Mobility in Indonesia

As part of SHERA's public outreach efforts, Dr. Eng. Bentang Arief Budiman and Dr. Annisa Jusuf, NCSTT researchers, shared some solutions for transportation challenges at the USAID SHERA talk show "Transportation Technology: Solution for Mobility in Indonesia" on April 30, 2019. The event was held at @america in Jakarta.



Figure 13: SHERA talk show on April 30, 2019. 170 participants attended.



Figure 10: Audience members asking CCR experts questions

Dr. Budiman, a composite structure expert at ITB, explained how NCSTT offers innovative solutions through sustainable transportation technology for Indonesia's transportation problems. Dr. Jusuf, a transportation safety expert at ITB, also shared her expertise on safety and worthiness technology for Indonesia's vehicles. She explained transportation safety issues based on the data., showing that the best vehicle is the one who can absorb energy during accidents while protecting the passengers from injury.

As NCSTT is developing an electrical bus with Transjakarta, the company's representatives were also present at the

talk show. Daud Joseph, Operational Director, agreed on the importance of public transportation that accommodate public needs. At the end of the event, Transjakarta's Executive Director also joined the discussion and let the participants ride the electrical bus. This event was attended by 170 participants and 4 members from the media.

Monitoring, Evaluation, and Learning (MEL) Training

SHERA conducted a MEL Training on May 15 – 17 in Bandung. The participants were MEL teams from each CCR. During the training, the MSC model was put into practice. The MSC approach had previously been presented at a training at the University of Bangka Belitung and it focused on the practice and utilization of MSC. This second session invited participants to write down the flow of the MSC in accordance with the conditions of the study and their CCR.

III. Operations

3.1 Limited Financial Review

On June 4, 2019, USAID sent IIE the summary of its LFR. This summary included USAID observations and recommendations for SHERA based on the review it had conducted the previous month. USAID examined and identified some areas, namely internal controls, that should be addressed by SHERA. As per USAID protocol, SHERA will respond to the recommendations within 60 days (August 4, 2019). USAID will then conduct a follow-up desk review after receiving SHERA's remarks and may coordinate another site visit, if necessary.

3.2 Asset Management

SHERA conducted its annual asset management, as well as the re-tagging of its inventory, as of June 30, 2019. This action was taken in response feedback received in USAID's LFR, which was conducted in mid-May 2019. At the time of this report, all SHERA assets have a USAID inventory tag.

3.3 Incremental Increase in Funds

On June 26, 2019 USAID sent IIE Modification No. 3 to Cooperative Agreements No. AID-497-A-16-00004/SHERA. The modification provided an incremental funding increase of \$2,089,870.58, thus increasing the total obligated amount from \$7,388,912.26 to \$9,478,782.84. At the time of this report, this increase is intended to support IIE and IIEF program and operational expenses through September 2020, in addition to the five CCR's programmatic and operational expenses. Since most of the CCRs have spent out the majority, if not all, of their current obligations by the end of this reporting period, IIE will use this modification to provide incremental increases to the CCRs in July 2019.

IV. Challenges

4.1 Journey to Self-Reliance

On October 18th, 2018 USAID presented J2SR as a new policy concept to all Implementing Partners. IIE has been working with USAID and CCR leads to determine how to strategically incorporate J2SR's approach while continuing to sustain and support program activities. On May 16, 2019, USAID invited all Implementing Partners to attend its Financing of Self-Reliance (FSR) presentation and discussion.



Figure 11: USAID/Indonesia with all Implementing Partner Chief of Parties after the J2SR presentation.

To assist educating the CCRs about the J2SR, SHERA has invited USAID to make a J2SR presentation to the CCRs when SHERA has a strategic meeting in August.

The most challenging condition for implementing J2SR under SHERA is how to translate USAID's request to engage stakeholders more collaboratively to shape the long-term focus and capacity that the centers need to contribute to Indonesia's sustainable research development, while taking into account a potential decrease in funding. Reduced funding leads to reduced CCR activities and KPIs. As it will change the CCRs' program description, it leads to MoU amendments that then need to be approved by IIE. Once, IIE has collected all of the five CCRs program amendments, they should then be incorporated to a new SHERA program description, which includes the modified activities, modified budget, and modified KPIs to be approved by USAID.

4.2 IPB Management

As a follow on to the concerns expressed about IPB's performance in previous reports, the Director of USAID Programs at IIE, SHERA Program Director, and two managers visited IPB in April. The goal of the meeting was to find solutions to its management challenges. The IIE team met with the Vice Rector of Research and Partnership, the Director of International Partnerships, and the ANBIOCORE Program Director. As a result, all parties agreed that IPB would report its performance every two weeks to SHERA through an Improvement Development Plan (IDP). The IDP consists of programmatic, MEL, communication, and finance/grant management tasks, all addressing the most priority concerns each period. Based on the submission of that form, SHERA provides feedback and next steps where applicable.



Figure 16: IIE USAID Program Director and SHERA Team met IPB's Vice Rector and Director of International Office

Within this reporting period, IPB submitted the Improvement Plan twice, covering May 15 – 31, June 1 – 12, and June 13 – July 1, 2019. With SHERA's feedback, IPB hired an additional Partnership Manager who will support day-to-day technical and research support in the Husbandry cluster. On the operations side, the previous Office Manager was replaced by Edith Sabara, who has more experience in project management. IIE is working very closely with the new team to ensure their success throughout the remainder of their project, which ends in March 2021. If IPB's current Finance Officer were also to resign, IPB would face challenges in operational execution and would require a replacement with USAID experience.

4.3 Incremental Increase in Funds

July 2019 through September 2020 is the period in which all CCRs will be spending at their highest rate, as their main research activities peak. However, there based on the funding available, CCR activities will be limited. Based on the obligation increase IIE received in June 2019, IIE will work to ensure that all SHERA subrecipients will receive an obligation increase to cover both operational costs and programmatic activities through September 2020. Through the subaward modification process, IIE will work closely with each CCR to select program priorities which still meet minimum targets for USAID. It should be noted, though, that activities and KPIs will have to be revised to accommodate lower funding levels.

4.4 CCR's Operational and Program Capacity

Challenges unique to each CCR include the following:

CDSR

CDSR started implementing research on photovoltaics (PV) and algae at three different locations: An island at Bangka Belitung, at the ITB campus, and at the UGM campus. The three separate procurements had to be conducted, as those locations are scattered quite far and there are different vendors at those places. IIE has received the proposal and neg memo submission, reviewed the documents, and sent reply its reply to CDSR. As there was a budget reduction from USAID within this period while CDSR had already reached its obligation limit in mid-May, CDSR was then forced to readjust the size of the PV and revise its procurement memo.

ANBIOCORE

CCR ANBIOCORE faced challenges in this period regarding subaward payments for affiliates, as well as following procurement processes for research materials. Additionally, CCR ANBIOCORE had issues in managerial communication, resulting in a new management structure that has been proposed to SHERA.

To avoid future problems, they will follow SHERA grant guidelines and procedures in their document preparation for financial procedures. Based on SHERA's recommendations, they will also finalize their Standard Operational Procedure (SOP) and disseminate to all researchers and managerial staff, both lead and the affiliates. The CCR ANBIOCORE management has ensured SHERA that they are committed to improve managerial communication and performance in order to achieve the promised targets.

Collaboration of IPB with the U.S. universities

- IPB – Mississippi State University (MSU): When the MoU was signed by the two institutions, it was agreed that a Professor at MSU would be dedicated to capacity building for IPB and Indonesian affiliates. Both parties agreed that the remaining obligation of IDR 4,270,379,348 be reallocated to Lead. It was supported by a letter notifying that all of the reallocated funds to the Lead would be dedicated to materials and services, and contracting services.
- IPB - URI: URI visited Indonesia to continue their collaborative research with IPB and UNIPA in early June in Misool, Raja Ampat. Based on the samples and data they collected, they started working on the analysis and are in the process of writing the research findings. Although the research activities ran well, URI faced difficulties in managing the funding mechanism with IPB. As a result, URI plans on a submitting a letter to IPB that will request additional funds to finalize the research from Misool, deliver the results, and then shorten the period of performance. IPB must work with SHERA to manage the administrative and technical

challenges in this situation

NCSTT

The implementation of all NCSTT activities relies heavily on the budget availability but they have reached their first obligation limit. Not having the budget to fund those activities will create uncertainty and cause the activities to be cancelled, postponed or being funded by another source. Cancellation or postponement may affect the CCR's performance and target achievements, as these issues include stipend disbursement for researchers, research activities, and material procurement. The same is true for hosting an international conference, as funding uncertainty is a major hindrance to planning. Based on the incremental increase IIE received from USAID in June 2019, IIE will be able to provide an obligation increase to NCSTT in the next quarter but uncertainty will remain about future program activities, with the obligation expected to last through September 2020.

CCR ARI

CCR ARI experienced delayed financial report of the affiliates, and also includes delayed modification of the upcoming program year. This is due to the unhealthy condition of the ARI Finance Manager, with the additional load of the Cost Reimbursement grant system applied by the CCR ARI to the affiliates. IIE provided support through direct and virtual mentoring to resolve this challenge, but delayed report and increasing payable is getting higher. IIE suggested to hire an additional finance staffs to support the Finance Manager and the Administration Officer, ARI planned to hire an experienced staff in July.

CCR ARI team conducted direct mentoring visits to affiliates and found that most affiliate institutions still found difficulties in complying with SHERA's financial timelines and procedures. This has caused the disbursement of funds to stall and prevent the management team to settle expenditures and paying for field doctor's salary. SHERA worked with ARI to invite the affiliates to the Lead's office to provide training to solve these challenges. This plan was halted, however, as ARI then prioritized the research instead of the management.

Additionally, each partner has different research interests, which is then quite challenging to integrate them into the CCR's research plans. To accommodate these interests, CCR ARI has broadened its focus by offering the general domain of public health and medicine, not only limiting to acute respiratory infections. With this expansion, the team hopes that this strategy will increase the collaborative research and partnerships among the members of CCR ARI.

SMART CITY

The SMART CITY team has been challenged to recruit participants for its virtual knowledge-sharing activities. Low participation has mainly been due to low interest levels from scholars, as they are hesitant to join virtual activities, and those who were interested turned out to be undergraduate degree scholars, which is not the audience target. Even though the virtual activities were finally carried out, the team faced another challenge in how to best record the event, as it was not an easy medium. For future virtual activities, the SMART CITY team plans on brainstorming with the SHERA team on how best to conduct these activities.

V. Activities Anticipated for Next Quarter (July - September 2019)

5.1 MEL and Management Information System

In the next quarter, the SHERA MEL team will review the SHERA Program Implementation Reference Sheets (PIRS) and revise the targets' numbers. This review will be based on the CCRs' current practices and their achievements that have been gathered in the CCRs' reporting. The MEL team has

also found that some of the indicators should be revised to meet the appropriateness of individual indicators' measurements and to be better aligned with J2SR.

Data entry is also ongoing in the MIS platform and there is a currently a plan to hold a session on data quality for the CCRs' MEL teams in August 2019. The second MIS training is for all CCRs' focal points and will aim to increase the understanding of all CCRs' MEL focal points in how to operate the MIS, analyze information, and use the data for their own management decisions. The MEL team also plans to enhance the MIS platform by developing a data dashboard for the program decision support system. The MIS can then represent the program data in a timely and accurate manner, particularly in relation to the PIRS.

5.2 CCR Monitoring

As the CCRs have implemented many activities throughout the past two years, the SHERA team will continue monitoring the CCRs and their affiliates to obtain more accurate information on activities and provide tangible products to SHERA's beneficiaries on its impact. The team will also reintroduce the updated PIRS once all the revised and updated indicators are approved by USAID in order to increase the CCRs' understanding and concerns that implicates to their contributions.

5.3 CCR Direct Mentoring

The SHERA team will continue ongoing mentoring for impact story development and tracking, as well as direct in-person and virtual mentoring to the CCRs. Within the team's outreach efforts, there will also be an emphasis on financial reporting, grant disbursements, and communication outreach through the website and booklets.

5.4 Stakeholder Engagement

In early August, SHERA will hold a meeting with the GOI to present the MESP findings, USAID's new J2SR strategic plan, and USAID's FY19 roadmap for Indonesia. Important aspects of this meeting will include identifying a CCR-wide management plan and goal-setting for PSE and sustainability beyond the life of the program. In addition, the SHERA team has invited the GOI to learn more about SHERA's PPP strategy and provide input.

5.5 HAKTEKNAS Commemoration

Every August, MoRTHE holds a National Technical Awakening Day, which takes place in Bali. SHERA has been invited to participate in the commemoration for the past two years. The SHERA team was offered three separate booths by MoRTHE, where USAID, IIE and the five CCRs will display their work and research products. SHERA looks forward to attending again in August 2019.

Annex I: SHERA's KPI Achievements

Results Framework	Performance Indicators	Actual	Target FY 2019			CDSR		ANBIOCORE		NCSTT		ARI		SMART CITY		Total	Deviation %
		FY 2018	CCRs Compiled	SHERA Adjusted	Proposed Targets	CCRs Target	Total	CCRs Target	Total	CCRs Target	Total	CCRs Target	Total	CCRs Target	Total	End the Project	
Sustainable Improvement in Quality and Quantity of Science and Technology Research in Indonesian Higher Education Institutions.	1. Number of peer-reviewed scientific publications resulting from USG support to research and implementation program	77	132	0,8	106	33	22	10	16	25	1	10	0	54	123	162	1,53
	<i>Journal Articles</i>	40					20		6		1		0		15	42	
	<i>Proceeding Articles</i>	37					2		10		0		0		108	120	
	<i>Status of Scopus</i>																
	<i>Indexed Scopus</i>						21		5		1				119	146	
	<i>Non Indexed Scous</i>						1		11						4	16	
	2. Ratio of citation to publication produced by Indonesia researchers	1	15	0,5	8	5		0		5	4	5	0	0	13	17	2,13
	<i>Journal Articles</i>	1									1				8	9	
	<i>Proceeding Articles</i>	0									3				5	8	
	<i>Sex:</i>	0														0	
	<i>Male</i>	1									3				10	13	
	<i>Female</i>	0									1				3	4	
	<i>Period of Citation</i>	2018														0	
	3. Number of academic research initiatives whose findings have been replicated, applied, or taken to market.	0	12	0,5	6	1	1	6	0	3	0	2	0	0	0	1	0,17
	<i>Country of Origin</i>															0	
	<i>Sectors:</i>															0	
	<i>Governments</i>						1									1	
	<i>Private Sectors</i>															0	
	<i>NGO</i>															0	

	Bilateral organization															0	
	Types:															0	
	Replicated															0	
	Taken to the Market															0	
	Applied						1									1	
Outcome I	Improved capacity of faculty, PhD students and postdoctoral researchers in target Indonesian universities																
Outcome I.1	I.1 % of scholars who present at conference	0,41	0,27		0,43	0,13	0,07	0,26	0,52	0,52	0,11	0,04	0,10	0,42	0,32	0,35	0,82
	numerator	68	103	0,8	82	20	11	6	12	50	11	3	5	25	19	58	
	denominator	165	380	0,5	190	150	150	23	23	97	97	50	50	60	60	165	
Increased trainings in research methods, writing and presentations skills	Male	47					5		8		8	2	2		10	33	
	Female	21					6		4		3	1	3		9	25	
	Age	0														0	
	25 - 45	41					11		7		11	3	3		19	51	
	46 - 65	26							5				2			7	
	up to 66	1														0	
	I.1.1. Number of short-term training courses held	38	31	1	31	4	2	9	0	5	3	11	5	2	2	12	0,39
	Training	32					1				2		4		1	8	
	Workshop	6					1				1		1		1	4	
	Others	0														0	
	Duration (Hrs)	832					16				48		80		56	200	
	I.1.2. % of researchers participating in short-term training courses	0,89	0,64		0,63	0,58	0,91	0,90	0,00	0,33	0,53	0,59	0,80	0,48	0,96	0,78	1,24
	numerator	1153	606	0,8	485	87	58	270	0	50	79	139	122	60	143	402	
	denominator	1294	961	0,8	769	150	64	300	0	150	150	236	152	125	149	515	
	Male	565									63		62		58	183	
	Female	588									16		74		85	175	
	Academic Level:	0														0	
	Master	587									60		67		115	242	
	Ph.D Students	360									19		31		25	75	

	<i>Sp1</i>	67											31		2	33	
	<i>Sp2</i>	17											7			7	
	<i>Postdoctoral Students</i>	122											0		1	1	
	I.1.3. Number of U.S. scholars visiting Indonesian institutions to lead short-term training courses for Indonesian partner institutions	13	18	1	18	2		5	0	4		2	3	5	16	19	1,06
	<i>Male</i>	12											2		12	14	
	<i>Female</i>	1											1		4	5	
	<i>Age</i>	0															
	<i>25 - 45</i>	5											1		3	4	
	<i>46 - 65</i>	6											1		12	13	
	<i>up to 66</i>	2											1		1	2	
	<i>Academic Level:</i>	0															
	<i>Master</i>	3											2			2	
	<i>Ph.D Students</i>	8											1		16	17	
	<i>Postdoctoral Students</i>	2														0	
	<i>Number of visits</i>	6											1		3		
Outcome 1.2	I.2 % of scholars who participate in collaborative research	0,68	0,72	0	0,72	0,47	0,40	0,86	0,29	1,00	0,77	1,00	1,50	1,00	0,90	1,09	1,50
	<i>numerator</i>	239	253	0,8	202	70	60	120	40	97	75	50	75	30	54	304	
	<i>denominator</i>	350	350	0,8	280	150	150	140	140	97	97	50	50	60	60	280	
Increased professional exchanges and collaborations	<i>Male</i>	124					34		25		33		33		22	147	0,37
	<i>Female</i>	115					26		15		42		42		32	157	
	I.2.1. Number of Indonesian scholars who participate in in-person faculty exchanges held in the U.S.	4	71	0,8	57	20	12	13	0	7	0	6	8	30	1	21	
	<i>Male</i>	3					4						5			9	
	<i>Female</i>	1					8						3		1	12	
	<i>Age</i>	0														0	
	<i>25 - 45</i>	4											8			8	

	46 - 65	0														0		
	up to 66	0													1	1		
	Academic Level:	0														0		
	Master	0					4						2			6		
	Ph.D Students	4					8						5			13		
	Postdoctoral Students	0											1			1		
	I.2.2. Number of Indonesian scholars who receive ongoing mentoring from U.S. university partners	18	89	0,8	71	6	7	14	1	3	0	36	8	30	98	114	1,61	
	Male	4					2		0				2		33	37		
	Female	8					5		1				6		65	77		
	Age	0														0		
	25 - 45	13					5		1						90	96		
	46 - 65	3					2								8	10		
	up to 66	1														0		
	Academic Level:	0																0
	Master	13							1				4		82	87		
	Ph.D Students	3											3		16	19		
	Postdoctoral Students	1											1			1		
	I.2.3. Number of scholars who participate in virtual knowledge exchange	155	451	0,5	226	20	0	60	0	105	0	66	0	200	0	0	0,00	
	Male	89													0	0		
	Female	66													0	0		
Outcome 2	Strengthened, inclusive institutional environment for research and management in target Indonesian universities																	
Outcome 2.1	2.1. % of Indonesian institutions with improved research policies and systems in place.	0,33	0,52		0,52	1,00	0,00	0,13	0,00	0,43	0,00	0,00	0,00	1,00	0,00	0,00	0,00	
	numerator	5	12	1	12	7	0	1	0	3	0	0		1		0		
	denominator	15	23	1	23	7	0	8	0	7	7	0		1		7		
Institutional policies in support for research and	Lead	1									0					0		
	Affiliates	4														0		

management developed in CCR members	2.1.1. Number of institutions that develop improved research and management policies developed	5	6	1	6	0	1	1	0	3	1	1	1	1	5	8	1,33
	Lead	1					1				1		1		1	4	
	Affiliates	4													4	4	
Outcome 2.2	2.2. % of CCR members with improved administrative and management systems in place.	0,27	0,59		0,59	1,00	0,14	0,13	0,13	0,71	0,14	0,20	0,20	0,60	1,00	41%	0,69
	numerator	4	16	0,8	13	7	1	1	1	5	1	1	1	3	5	9	
	denominator	15	27	0,8	22	7	7	8	8	7	7	5	5	5	5	22	
CCR best practices documented and disseminated to Indonesian higher education institutions	Lead	5					1		1		1		1		1	5	
	Affiliates	0														0	
	Gender (Y/N)	2													1	1	
	2.2.1. Number of CCR websites that are developed, operational and used regularly	3	5	1	5	1	1	1	1	1	1	1	1	1	1	5	1,00
	2.2.2. Number of CCR knowledge products created	189	96	1	96	9	30	40	7	28	76	18	7	1	32	152	1,58
	Gender (Issues)	16					4								2	6	0,29
	2.2.3. Number of CCR knowledge sharing events held on best-practices & lessons learned	44	14	1	14	2	0	2	0	8	3	1	0	1	1	4	
	2.2.4. Number of people participated in activities addressing gender equality or female empowerment in science and technology research.	176	200	0,8	160	30	0	30	0	30	0	30	0	30	24	24	
	Male	40													10	10	
Female	136													14	14		
Outcome 3	Enhanced collaboration in CCR/Consortium for collaborative research																
Outcome 3.1	3.1 % of institutions engaged in joint research projects	1,02	1,00		1,00	1,00	1,00	1,00	1,10	1,00	1,00	1,00	1,00	1,00	3,10	1,51	1,51
	numerator	42	42	1	42	9	9	10	11	8	8	6	6	10	31	65	
	denominator	41	42	1	42	9	9	10	10	8	8	6	6	10	10	43	

Formal relationships established among U.S. and Indonesian institutions	in -country based	34					8		9		7		5		27	56	
	US based	8					1		2		1		1		4	9	
	Third country based	0														0	
	type of institution	0														0	
	Academic	41					8		11		8		6		31	64	
	Private Sectors	0														0	
	Public Sectors	0							5				12			17	
	3.1.1. Number of selected affiliate institutions included in research consortium	38	38	1	38	7	7	10	9	7	6	5	16	9	5	43	1,13
	in -country based	38					7		9		6		16		5	43	
	Third country based	0														0	
	type of institution	0														0	
	Academic	30					7		9		6		4		5	31	
	3.1.2. Number of scholars at CCR institutions with increased access to external research resources and academic research engines.	189	171	0,8	137	21	0	60	0	40	0	40	0	10	0	0	0,00
	Male	102														0	
	Female	87														0	
	Master	96														0	
	Ph.D Students	68														0	
	Sp1	6														#VALUE!	
	Sp2	12														0	
	Postdoctoral Students	7														0	
Outcome 3.2	3.2. % of Indonesian institutions obtaining external resources for their joint research project	0,3	0,41	1,00	0,41	0,50	0,10	0,00	0,00	0,29	0,57	0,40	0,60	0,40	0,20	0,37	0,90
	numerator	9	11	1	11	5	1	0	1	2	4	2	3	2	1	10	
	denominator	30	27	1	27	10	10	0	0	7	7	5	5	5	5	27	
	Affiliates	6					1		1		3		3			8	

Annex II: SHERA Quarterly Activity Record

No	FY	Date	Activity	Purpose of Activities	Location/City	Participants				Total # of Participants		Total
						Rector/Vice Rector		Faculty/SHERA				
						F	M	F	M	F	M	
1	FY3-Q3	April 1-2 2019	Grant Monitoring to Universitas Lambung Mangkurat	To monitor the CCR ARI's affiliates (ULM) finance report	Banjarmasin, South Kalimantan	0	0	4	3	4	3	7
2	FY3-Q3	April 1-3 2019	MEL Field monitoring to ANBIOCORE Affiliates, Universitas Brawijaya	1. To ensure the research works at CCR ANBIOCORE with its highlighted evidence and impact 2. To collect the data of impact from the respective CCR's scholars during their involvement in SHERA program,	Malang, East Java	0	0	4	4	4	4	8
3	FY3-Q3	April 3 - 7 2019	MEL Field monitoring to SMART CITY Affiliates, Universitas Udayana	1. To ensure the research works at CCR ANBIOCORE and SMART CITY with its highlighted evidence and impact 2. To collect the data of impact from the respective CCR's scholars during their involvement in SHERA program,	Kampus Udayana I & II, Bali	0	1	6	11	6	12	18
4	FY3-Q3	April 5 2019	USAID financial management and Procurement Workshop	To attend USAID financial management and Procurement Workshop	Jakarta	0	0	0	2	0	2	2

No	FY	Date	Activity	Purpose of Activities	Location/City	Participants				Total # of Participants		Total
						Rector/Vice Rector		Faculty/SHERA				
						F	M	F	M	F	M	
5	FY3-Q3	April 08-11, 2019	Finance & Grant Refreshment for CCRs	1. To increase the F&G focal point's capacity in managing their role and responsibility as reviewer, budget manager and fund manager, 2. To increase the F&G in preparing the procurement plan, admin, back up support in completing the documents of procurement process, especially in restricted commodities and equipments, 3. To work in real case of procurement proposed to SHEAR, expense report, based on respective CCR's needs 4. To produce more efficient process and better report quality, 5. to create pipeline relatedeith PAR and VBS, 6. To introduce the fraud and action needs,	Courtyard Hotel, Bandung	0	0	7	8	7	8	15
6	FY3-Q3	April 9, 2019	MESP Sustainability Study Presentation on the Concept and Methodology	To discuss the concept and methodology of SHERA sustainability study	MESP Office, Jakarta	0	0	2	0	2	0	2
7	FY3-Q3	April 18, 2019	Monitoring to CCR SMART CITY's activity on research grant evaluation	To monitor the SMART CITY's Research Grant process and results	Hotel Aston Tb. Simatupang, Jakarta	0	0	1	2	1	2	3
8	FY3-Q3	April 24, 2019	Internal Meeting IIE's Indonesia - Finance & Grant Team with Kristy	To share the grants & finance current practice in SHERA project	SHERA office, Jakarta	0	0	1	4	1	4	5
9	FY3-Q3	April 26, 2019	Meeting Coordination IIE with CCR SMART CITY - UI	To manage the UI expectation on situation room	Kampus UI, Depok	0	0	2	5	2	5	7
10	FY3-Q3	April 30, 2019	Talkshow on Transportation Technology; Indonesians' solution for mobility	To promote SHERA's research and researchers throgh their research work and partnership in transportation technology	@America, Jakarta	0	0	82	88	82	88	170
11	FY3-Q3	May 02, 2019	KSI Exchange Knowledge on Research Utilization into Public Policy	To get an exchange knowledge on research reults utilization into public policy	KSI office, Jakarta	0	0	1	0	1	0	1

No	FY	Date	Activity	Purpose of Activities	Location/City	Participants				Total # of Participants		Total	
						Rector/Vice Rector		Faculty/SHERA					
						F	M	F	M	F	M		
12	FY3-Q3	May 03, 2019	SHERA & CCR ANBIOCORE - IPB Management Meeting	To meet the Vice Rector to discuss the lack of management at IPB	Kampus IPB Darmaga, Bogor	0	1	1	6	1	7	0	
13	FY3-Q3	May 14-17, 2019	MEL Training	1) To build CCR MEL Specialists' knowledge and skills on MIS web application and able to perform data entry for CCRs' events, mentorship logbook and research logbook; 2) To ensure the completeness of database stored in the MIS web application –where all participants will have time to review and correct the database; and 3) To improve CCR MEL Specialist' knowledge and skills on identifying impacts that would reflect closely to their respective programming.	Aryaduta Hotel, Bandung	0	0	9	7	9	7	16	
14	FY3-Q3	May 16, 2019	J2SR meeting for implementing partners	To attend USAID updates on J2SR	USAID office, Jakarta	0	0	1	1	1	1	2	
15	FY3-Q3	May 21, 2019	AMHCM	To present SHERA program and explore for partnership	Jakarta	0	0	1	2	1	2	3	
16	FY3-Q3	May 22, 2019	Meeting Coordination IIE with CCR CDSR -UGM	To map UGM achievement and possibility of partnership	Kampus UGM, Yogyakarta	0	0	2	3	2	3	5	
17	FY3-Q3	June 14, 2019	Internal Meeting IIE's Indonesia - Programs Team with Edith	To share IIE policy and lesson learned to 3 IIE projects in Indonesia	SHERA Office, Jakarta	0	0	7	9	7	9	16	
18	FY3-Q3	June 19, 2019	MEL Virtual Mentoring	1) to get any feedback on MIS practice as May Reporting time, 2) to socialize MEL SHERA survey online 3) to update the existing KPI tracking records	SHERA Office, Jakarta	0	0	4	5	4	5	9	
19	FY3-Q3	June 19, 2019	Gender Training on Sexual Harrashment	To attend the preventing sexual misconduct Discussion	USAID Office, Jakarta	0	0	1	0	1	0	1	
20	FY3-Q3	June 26, 2019	MESP Sustainability Study Presentation on Pre-Result	To confirm the findings of its sustainability study	SHERA Office, Jakarta	0	0	3	4	3	4	7	
						Total	0	1	125	138	125	139	264

Annex III: CCR Quarterly Activity Record

No	Title of Activity	Type of Activity	Objective of Activity	Method of Activity	Date Start	Date End	Location	Venue	Actual		Total Participated Beneficiaries
									Male	Female	
CCR CDSR - UGM											
1	MEL Refreshment	Training	1. To build CCR MEL Specialists knowledge and skills on MIS web application and able to perform data entry for CCRs events, mentorship logbook and research log book 2. To ensure the completeness of database stored in the MIS web application – where all participants will have time to review and correct the database 3. To improve CCR MEL specialist knowledge and skills on identifying impacts that would reflect closely to their respective programming.	Traditional (Face to Face)	14-May-19	17-May-19	Bandung	Hotel Aryaduta Bandung	2	1	3
2	CDSR Visit To USA Year 2	Collaboration Meeting	1. Coordination meeting to accelerate the progress (for UCB) 2. Finishing to MoU signing (for new partners) 3. Coordination meeting for MoU follow up (for new partners)	Traditional (Face to Face)	30-Mar-19	14-Apr-19	Boulder	University Of Colorado At Boulder	26	7	33

No	Title of Activity	Type of Activity	Objective of Activity	Method of Activity	Date Start	Date End	Location	Venue	Actual		Total Participated Beneficiaries
									Male	Female	
3	Oral Presentation At International Conference On Smart Power & Internet Energy Systems (SPIES 2019)	Conference	Publication of research	Traditional (Face to Face)	25-Apr-19	27-Apr-19	Melbourne	Deakin University, Melbourne	0	1	1
4	MEL Meeting In UNG And UMGo	Reguler Meeting	<ul style="list-style-type: none"> • To conduct meeting and preparation with UNG and UMGo for the SHERA sustainability review • To support the UNG and UMGo teams in the SHERA sustainability review" 	Traditional (Face to Face)	23-Apr-19	27-Apr-19	Gorontalo	UNG And UMGo Campus, Gorontalo	10	18	28
5	CDSR Scholars Exchange Program	Exchange	<ul style="list-style-type: none"> • Producing paper through collaboration research and mentoring program • Research collaborative plan among Indonesia and US scholars 	Traditional (Face to Face)	30-Mar-19	21-Apr-19	Boulder	University Of Colorado At Boulder	61	32	93
Total Participated Beneficiaries on CDSR's Activities									99	59	158
CCR ANBIOCORE - IPB											

No	Title of Activity	Type of Activity	Objective of Activity	Method of Activity	Date Start	Date End	Location	Venue	Actual		Total Participated Beneficiaries
									Male	Female	
I	Monitoring, Evaluation And Learning Training	Training	<p>1. To build MEL Specialists' knowledge and skills on MIS web application and table to perform data entry for CCRs' event, mentorship logbook and research logbook;</p> <p>2. To ensure the completeness of database stored in the MIS web application - where all participants will have time to review and correct the database; and</p> <p>3. To improve CCR MEL specialists' knowledge and skills on identifying impacts that would reflect closely to their respective programming.</p>	Traditional (Face to Face)	14-May-19	17-May-19	Indonesia	Aryaduta Hotel, Bandung	1	0	1

No	Title of Activity	Type of Activity	Objective of Activity	Method of Activity	Date Start	Date End	Location	Venue	Actual		Total Participated Beneficiaries
									Male	Female	
2	Scholars Participating At 8th International Barcode Of Life (IBOL) Conference	Conference	1. Increase the capacity of CCR ANBIOCORE's researchers in international atmosphere by becoming a presenter at international conference 2. Provide information about Indonesia coral reef ecosystem that also related to Indonesia coral reef state 3. Strengthen the tie among researchers and expand professional network especially with scientists through the international conference.	Traditional (Face to Face)	17-Jun-19	20-Jun-19	Norway	Clarion Hotel & Congress	1	0	1
Total Participated Beneficiaries on ANBIOCORE's Activities									2	0	2
CCR NCSTT - ITB											
1	Solidworks Workshop And Certification	Workshop	1. Give participants understanding on Solidworks software and its features 2. Give opportunity to participants to try Solidworks software 3. Train participants to use several techniques available on solidworks software such as 3D drawing, assembly, and simulation	Traditional (Face to Face)	09-Apr-19	10-Apr-19	Bandung	Ruang Komputasi, Lab. Teknik Produksi FTMD ITB	5	4	9

No	Title of Activity	Type of Activity	Objective of Activity	Method of Activity	Date Start	Date End	Location	Venue	Actual		Total Participated Beneficiaries
									Male	Female	
			4. certify participants that has attended the workshop								
2	Transportation Technology - Solution For Mobility In Indonesia	Seminar	Introduce participants with new era of transportation and ongoing electric vehicle research at NCSTT, as well as transportation safety.	Traditional (Face to Face)	30-Apr-19	30-Apr-19	Jakarta Selatan	@america, Pacific Place 3rd Floor	1	1	2
3	Workshop On Additive Manufacturing Technology	Seminar	Introduce current additive manufacturing technology from the experts to faculties, students, and practitioner from universities and industries and its application on Transportation Technology	Traditional (Face to Face)	02-Apr-19	02-Apr-19	Bandung	Auditorium, East Campus Center (CC Timur), Institut Teknologi Bandung	3	1	4

No	Title of Activity	Type of Activity	Objective of Activity	Method of Activity	Date Start	Date End	Location	Venue	Actual		Total Participated Beneficiaries
									Male	Female	
4	The 6th International Conference On Electric Vehicular Technology (ICEVT) - Location Survey And Technical Preparation	Others	1. Coordinate with the team from Universitas Udayana to discuss the preparation for the 6th ICEVT 2. Visit Garuda Wisnu Kencana to discuss the contract for the 6th ICEVT venue	Traditional (Face to Face)	23-Apr-19	25-Apr-19	Badung	Hotel Ungasan	2	4	6
5	Electric Bus Validation & Certification Coordination Meeting LEN	Collaboration Meeting	Discussing E-Bus prototyping with PT LEN	Traditional (Face to Face)	16-Apr-19	16-Apr-19	Bandung	Ruang LAPI CRCS Lt. I ITB	5	2	7
6	Electric Bus Validation & Certification Coordination Meeting Transjakarta	Collaboration Meeting	Discussing PT Transjakarta as market prospectives and future collaboration plan	Traditional (Face to Face)	16-Apr-19	16-Apr-19	Bandung	Ruang LAPI CRCS Lt. I ITB	3	3	6
7	Workshop On Scientific Writing And Journal Submission	Others	To give training on steps in creating research articles to create research articles that will be submitted to IJSTT	Traditional (Face to Face)	02-May-19	03-May-19	Palembang	Aston Palembang	16	15	31
8	Coordination Meeting With PT Transjakarta	Collaboration Meeting	To Establish Forum Discussion Bus and Electric Transportation (FUSE)	Traditional (Face to Face)	15-May-19	15-May-19	Jakarta Pusat	PT Transjakarta	1	0	1

No	Title of Activity	Type of Activity	Objective of Activity	Method of Activity	Date Start	Date End	Location	Venue	Actual		Total Participated Beneficiaries
									Male	Female	
9	MEL Training	Training	<p>1. To build CCR MEL Specialists' knowledge and skills on MIS web application and able to perform data entry for CCRs' events, mentorship logbook, and research logbook.</p> <p>2. to ensure the completeness of database stored in the MIS web application - where all participants will have time to review and correct the database, and</p> <p>3. to improve CCR MEL Specialists' knowledge and skills on identifying impacts that would reflect closely to their respective programming</p>	Traditional (Face to Face)	14-May-19	17-May-19	Bandung	Hotel Aryaduta	2	1	3
10	Coordination Meeting With Laksana	Collaboration Meeting	Coordination for preparing technical instruments for E-Bus prototyping	Traditional (Face to Face)	28-May-19	29-May-19	Kab. Semarang	Laksana, Ungaran	8	0	8
11	NCSTT Visit Bakrie	Collaboration Meeting	Kick off meeting to start Etrike mass production	Traditional (Face to Face)	16-May-19	16-May-19	Jakarta Pusat	PT Bakrie	2	0	2
12	NCSTT Visit Grab	Collaboration Meeting	Initiate etrike research for trial and big data research	Traditional (Face to Face)	16-May-19	16-May-19	Jakarta Pusat	Grab	2	0	2
13	Visit To UNS Lithium Battery Production Unit	Collaboration Meeting	To see current activities and ongoing research at UNS Lithium Battery Production Unit	Traditional (Face to Face)	31-May-19	31-May-19	Indonesia	UNS	1	0	1

No	Title of Activity	Type of Activity	Objective of Activity	Method of Activity	Date Start	Date End	Location	Venue	Actual		Total Participated Beneficiaries
									Male	Female	
14	Trans Jakarta Director Visit NCSTT	Collaboration Meeting	1. Discuss PT Transjakarta Plan and Obligation to Test the Electric Bus 2. Discuss the partnership between ITB (CCR NCSTT) and Transjakarta 3. Discuss PT Transjakarta Road Map for Electric Bus Implementation	Traditional (Face to Face)	14-Jun-19	14-Jun-19	Bandung	Rektorat ITB	15	8	23
15	Bakrie Visit NCSTT	Collaboration Meeting	To discuss current progress on E-Bus prototyping process	Traditional (Face to Face)	18-Jun-19	18-Jun-19	Bandung	LPPM ITB	2	0	2
16	Interim Meeting Of The Battery Modeling Consortium	Dissemination Meeting	1. Disseminate CCR NCSTT research result on Battery Cell Casing and Components 2. Obtain information regarding the most recent research on transportation technology from the world leading researchers on the subject 3. Coordinate with CCR NCSTT researcher who are from Temple University and Massachusetts Institute of Technology	Traditional (Face to Face)	19-Jun-19	20-Jun-19	France	La Maison Des Polytechniciens - Roo, ARAGO	1	0	1
Total Participated Beneficiaries on NCSTT's Activities									69	39	108
CCR ARI - UNPAD											

No	Title of Activity	Type of Activity	Objective of Activity	Method of Activity	Date Start	Date End	Location	Venue	Actual		Total Participated Beneficiaries
									Male	Female	
1	Follow Up BOD Study 090419	Collaboration Meeting	To evaluate the progress of Burden of Disease Study in Bandung	Traditional (Face to Face)	09-Apr-19	09-Apr-19	Bandung	CCR ARI UNPAD Meeting Room	5	4	9
2	Follow Up BOD Study 160419	Collaboration Meeting	To evaluate the progress of Burden of Disease Study in Bandung	Traditional (Face to Face)	16-Apr-19	16-Apr-19	Bandung	CCR-ARI UNPAD Meeting Room	7	9	16
3	Follow Up BOD Study 020419	Collaboration Meeting	To evaluate the progress of Burden of Disease Study in Bandung	Traditional (Face to Face)	02-Apr-19	02-Apr-19	Bandung	CCR-ARI UNPAD Meeting Room	7	9	16
4	Immunogenicity Study Meeting (HCW Group)	Collaboration Meeting	To discuss the flow of HCW recruitment as a subject in RSHS	Traditional (Face to Face)	09-May-19	09-May-19	Bandung	RSHS Education And Research Department Meeting Room, Bandung	3	5	8
5	Immunogenicity Study Socialization To Elderly Target Patients	Socialization	To recruit elderly subjects for the study	Traditional (Face to Face)	04-May-19	04-May-19	Bandung	CCR ARI UNPAD Meeting Room	2	8	10
6	Immunogenicity Study Meeting	Reguler Meeting	To inform Dinas Kesehatan Kota Bandung about the vaccine study plan and obtain research permit	Traditional (Face to Face)	24-May-19	24-May-19	Bandung	Dinas Kesehatan Kota Bandung Meeting Room	4	3	7
7	BODS Data Evaluation Meeting 060519	Reguler Meeting	To evaluate missing and incomplete data on REDCap	Traditional (Face to Face)	06-May-19	06-May-19	Bandung	CCR ARI UNPAD Meeting Room - Eyckman Building, 5th Floor	1	4	5

No	Title of Activity	Type of Activity	Objective of Activity	Method of Activity	Date Start	Date End	Location	Venue	Actual		Total Participated Beneficiaries
									Male	Female	
8	BODS Data Evaluation Meeting 130519	Reguler Meeting	To follow up BODS data completeness in Bandung.	Traditional (Face to Face)	13-May-19	13-May-19	Bandung	CCR ARI UNPAD Meeting Room - Eyckman Building, 5th Floor	1	4	5
9	BODS Data Evaluation Meeting 020519	Reguler Meeting	To evaluate missing and incomplete data on REDCap	Traditional (Face to Face)	02-May-19	02-May-19	Bandung	CCR ARI UNPAD Meeting Room - Eyckman Building, 5th Floor	2	4	6
10	BODS Follow-up Meeting 070519	Reguler Meeting	To evaluate BODS progress in Bandung	Traditional (Face to Face)	07-May-19	07-May-19	Bandung	CCR ARI UNPAD Meeting Room - Eyckman Building, 5th Floor	7	9	16
11	BODS Data Evaluation Meeting 200519	Reguler Meeting	To follow up BODS data completeness in RSHS and RSUD Al Ihsan	Traditional (Face to Face)	20-May-19	20-May-19	Bandung	CCR ARI UNPAD Meeting Room - Eyckman Building, 5th Floor	2	6	8
12	Pharmajet Study Meeting	Collaboration Meeting	To arrange new research collaboration plan with Pharmajet	Traditional (Face to Face)	21-May-19	21-May-19	Bandung	Child Health Department RSHS, 1st Floor (Meeting Room)	1	5	6

No	Title of Activity	Type of Activity	Objective of Activity	Method of Activity	Date Start	Date End	Location	Venue	Actual		Total Participated Beneficiaries
									Male	Female	
13	BODS Data Evaluation Meeting 270519	Reguler Meeting	To follow up BODS data completeness in RSHS and RSUD Al Ihsan	Traditional (Face to Face)	27-May-19	27-May-19	Bandung	CCR ARI UNPAD Meeting Room - Eyckman Building, 5th Floor	8	6	14
14	Global Health Partnership Training	Socialization	1. To improve Indonesian faculties capacity in initiating and conducting sustainable collaborative academic research; 2. To link and match Indonesian and US faculties based on common interest, for international collaboration on research and education	Traditional (Face to Face)	21-Apr-19	03-May-19	Denver	Center For Global Health, University Of Colorado Denver	11	6	17
15	Evaluation And Analysis Data Of Ethical Aspect Of Biobank Project 2019	Collaboration Meeting	1. To Evaluate the data collection process & data quality of Study on Bioethical aspect of biobank in Indonesia, 2. To design and drafting outline topics for manuscripts	Traditional (Face to Face)	11-Apr-19	12-Apr-19	Mataram	Faculty Of Medicine, Universitas Mataram, Mataram	5	3	8
16	Immunogenicity Study Meeting April 2019	Collaboration Meeting	Subject recruitment preparation	Traditional (Face to Face)	04-Apr-19	04-Apr-19	Bandung	CCR-ARI UNPAD Meeting Room	5	10	15
17	Immunogenicity Study Meeting April 2019	Collaboration Meeting	To discuss technical aspects of the study with nursing team, clinical pathology team, pharmacy team, and human resources team	Traditional (Face to Face)	10-Apr-19	10-Apr-19	Bandung	CCR-ARI UNPAD Meeting Room, Bandung	10	9	19

No	Title of Activity	Type of Activity	Objective of Activity	Method of Activity	Date Start	Date End	Location	Venue	Actual		Total Participated Beneficiaries
									Male	Female	
18	BOD Study Data Evaluation	Reguler Meeting	To evaluate data completeness of Burden of Disease Study in Bandung	Traditional (Face to Face)	29-Apr-19	29-Apr-19	Bandung	CCR-ARI UNPAD Meeting Room	4	5	9
19	Direct Mentoring To ULM	Mentoring	<p>To encourage the affiliate management team to:</p> <ol style="list-style-type: none"> 1. Create a strategy to leverage achievement and engagement; 2. Understand about the reporting cycle in USAID SHERA Project; 3. Understand about supporting documents needed in activity reporting; 4. Submit all related documents and reports in timely manner; 5. Finalize the Affiliate – UNPAD and Affiliate – Hospital sub-contract. 	Traditional (Face to Face)	01-Apr-19	02-Apr-19	Banjarmasin	Fakultas Kedokteran, ULM	6	5	11
20	Immunogenicity Study Meeting	Reguler Meeting	To prepare socialization meeting of elderly study and subject recruitment of adult study	Traditional (Face to Face)	05-Apr-19	05-Apr-19	Bandung	Poly Geriatric RSUP Dr Hasan Sadikin	4	2	6

No	Title of Activity	Type of Activity	Objective of Activity	Method of Activity	Date Start	Date End	Location	Venue	Actual		Total Participated Beneficiaries
									Male	Female	
21	Short Course On Introduction To Biostatistics	Training	<p>To train participant so they can:</p> <ol style="list-style-type: none"> 1. Understand and perform appropriate data management in spreadsheet and/or statistical software 2. Understand the concept of estimation and hypothesis testing 3. Select and perform the most appropriate statistical analysis to answer the research question(s) at hand 4. Display the results of the analysis using appropriate tables or graphics 5. Interpret the results of the analysis 	Traditional (Face to Face)	23-Apr-19	25-Apr-19	Bandung	Magnolia Meeting Room, Courtyard Hotel, Bandung	14	22	36
22	Mortality Study Meeting 030519	Reguler Meeting	<ul style="list-style-type: none"> •To discuss result from data collection trial in RSHS •To determine inclusion and exclusion criteria for administrative selection •To set preparation for enumerator interview 	Traditional (Face to Face)	03-May-19	03-May-19	Bandung	Ruang CCR-ARI	2	2	4

No	Title of Activity	Type of Activity	Objective of Activity	Method of Activity	Date Start	Date End	Location	Venue	Actual		Total Participated Beneficiaries
									Male	Female	
23	Zoom Meeting - Research Issues 080519	Reguler Meeting	•To update progress of manuscript writing •To update research activity progress"	Virtual (Online)	08-May-19	08-May-19	Bandung	Bandung, Denver	4	3	7
24	Zoom Meeting - Research Issues 150519	Reguler Meeting	To update research activity progress	Virtual (Online)	15-May-19	15-May-19	Bandung	Bandung, Denver	3	1	4
25	Rapat Penelitian Penyakit Zoonosis	Reguler Meeting	To follow up new research collaboration proposal	Traditional (Face to Face)	20-May-19	20-May-19	Bandung	Ruang Rapat CCR ARI	3	6	9
26	Rapat Koordinasi Lab (BOD Study)	Reguler Meeting	To update laboratory activity progress	Traditional (Face to Face)	21-May-19	21-May-19	Bandung	CCR ARI UNPAD Meeting Room	1	5	6
27	Zoom Meeting - Research Issues 220519	Reguler Meeting	To update research activity progress	Virtual (Online)	22-May-19	22-May-19	Bandung	Bandung, Denver	3	2	5
28	Mortality Study Meeting 270519	Reguler Meeting	To discuss research implementation progress	Traditional (Face to Face)	27-May-19	27-May-19	Bandung	Ruang CCR-ARI	3	2	5
29	Evaluation Of Burden Of Disease Study In RSUD Prov. NTB 180619	Reguler Meeting	To identify barriers in BOD data collection in RSUD Prov. NTB	Traditional (Face to Face)	18-Jun-19	18-Jun-19	Mataram	Media Centre RSUD Prov NTB	4	6	10
30	Evaluation Of Burden Of Disease Study In RSUD Prov. NTB 220619	Reguler Meeting	To identify barriers in BOD data collection in RSUD Praya	Traditional (Face to Face)	22-Jun-19	22-Jun-19	Lombok Tengah	Aula RSUD Praya	6	5	11
31	Immunogenicity Study Meeting (Partnership Agreement)	Collaboration Meeting	To discuss the MOU component between RSHS, Unpad, and Biofarma	Traditional (Face to Face)	26-Jun-19	26-Jun-19	Bandung	Meeting Room CCR-ARI UNPAD	8	5	13

No	Title of Activity	Type of Activity	Objective of Activity	Method of Activity	Date Start	Date End	Location	Venue	Actual		Total Participated Beneficiaries
									Male	Female	
32	BODS Data Evaluation Meeting 250619	Reguler Meeting	To follow up BODS data completeness in RSHS and RSUD Al Ihsan	Traditional (Face to Face)	25-Jun-19	25-Jun-19	Bandung	SHERA Meeting Room - Eyckman Building, 5th Floor	4	5	9
33	Immunogenicity Study Collaboration Meeting 200619	Collaboration Meeting	To discuss the MOU component between RSHS, Unpad, and Biofarma	Traditional (Face to Face)	20-Jun-19	20-Jun-19	Bandung	Meeting Room Diklit RSHS	10	9	19
34	Immunogenicity Study Meeting 190619	Reguler Meeting	To discuss the technical aspect of the elderly study	Traditional (Face to Face)	19-Jun-19	19-Jun-19	Bandung	Meeting Room Of The Geriatric Clinic RSHS	3	5	8
35	Vaccine Study Socialization Meeting For Nurse (HCW) 200619	Socialization	To disseminate immunogencity study flow to representative nurses in RSHS	Traditional (Face to Face)	20-Jun-19	20-Jun-19	Bandung	Meeting Room Diklit RSHS	28	19	47
36	Training Enumerator Mortality Study	Training	-To explain job description as an enumerator in mortality study. -To train enumerators in filling questionnaires through RedCap.	Traditional (Face to Face)	14-Jun-19	14-Jun-19	Bandung	Computer Labs, 5th Floor, RSP UNPAD	7	7	14

No	Title of Activity	Type of Activity	Objective of Activity	Method of Activity	Date Start	Date End	Location	Venue	Actual		Total Participated Beneficiaries
									Male	Female	
37	CIPP XVIII: International Congress On Pediatric Pulmonology	Conference	<ul style="list-style-type: none"> •Dissemination of project results and to improve the draft of manuscript so that they could be published in international reputable journal. •Stimulate the publication of articles in the international reputable journals •Develop the researcher culture to disseminate the results at International conferences. •Increase the opportunities for research collaboration between Indonesian and International researcher. 	Traditional (Face to Face)	27-Jun-19	30-Jun-19	Japan	Chiba, Tokyo	0	1	1
Total Participated Beneficiaires on ARI's Activities									198	221	419
CCR SMART CITY - UI											
1	Dinas Perindustrian & Energi Visit	Collaboration Meeting	To discuss regarding possible research collaboration for the Agency's Feasibility Study	Traditional (Face to Face)	01-Apr-19	01-Apr-19	Depok	Kantor SMART CITY, ILRC Lantai 3	9	2	11
2	Partnership meeting with PT PGI	Collaboration Meeting	To establish a legal Agreement between SMART CITY and PT Pangripta Geomatika Indonesia for research purposes and feasibility study	Traditional (Face to Face)	11-Apr-19	11-Apr-19	Jakarta Selatan	Freshmart Simatupang	3	0	3

No	Title of Activity	Type of Activity	Objective of Activity	Method of Activity	Date Start	Date End	Location	Venue	Actual		Total Participated Beneficiaries
									Male	Female	
3	Meeting with KEMENDAGRI	Collaboration Meeting	To discuss further regarding SMART CITY and Internal Affair Ministry scope of work and clauses in Collaboration Agreement	Traditional (Face to Face)	18-Apr-19	18-Apr-19	Jakarta Selatan	Aston Priority Conference Hotel	4	2	6
4	the 3rd Monev of Research Grant	Collaboration Meeting	To review the final output progress of Research Fellowship groups: all output reaching accepted for publication status	Traditional (Face to Face)	18-Apr-19	18-Apr-19	Jakarta Selatan	Aston Priority Conference Hotel	22	23	45
5	Research Consortium Selection	Collaboration Meeting	To review 14 submitted proposals to choose 7 consortium teams for the Consortium Research Fellowship program	Traditional (Face to Face)	18-Apr-19	18-Apr-19	Jakarta Selatan	Aston Priority Conference Hotel	18	11	29
6	The evaluation meeting on Insentif Manuskrip Periode April 2019	Reguler Meeting	Memberikan insentif publikasi kepada peneliti	Traditional (Face to Face)	18-Apr-19	18-May-19	Depok	SMART CITY Office	4	1	5
7	Sharing & Learning Collaboration With Tanri Abeng University	Talk Show	To share knowledge of research result virtually with collaborating university participants and other Indonesian Institutions	Virtual (Online)	17-May-19	17-May-19	Jakarta Selatan	Mayapada Ballroom, Tanri Abeng University	18	10	28
8	Collaborative Meeting among Feasibility Study Team and PT PGI	Reguler Meeting	To discuss further regarding development of Situation Room prototype	Traditional (Face to Face)	02-May-19	02-May-19	Depok	Kantor SMART CITY Lt. 3	7	2	9

No	Title of Activity	Type of Activity	Objective of Activity	Method of Activity	Date Start	Date End	Location	Venue	Actual		Total Participated Beneficiaries
									Male	Female	
9	Bupati Kabupaten Mappi Papua Visit	Collaboration Meeting	To discuss about possible research consortium to develop Smart City development of Mappi Regency in Papua Province	Traditional (Face to Face)	02-May-19	02-May-19	Depok	SMART CITY Office	4	6	10
10	MEL Refreshment	Training	To build knowledge and skills on MIS web application and able to perform data entry for CCRs' events, mentorship logbook and research logbook; to ensure the completeness of database stored in the MIS web application; and to improve knowledge and skills on identifying impacts	Traditional (Face to Face)	14-May-19	17-May-19	Bandung	Hotel Aryaduta	0	3	3
11	Collaborative Meeting among Feasibility Study Team and PT PGI (I)	Reguler Meeting	To discuss the finalization of Situation Room development	Traditional (Face to Face)	15-May-19	15-May-19	Depok	SMART CITY Office	4	1	5
12	Assessment Meeting for Resaerch Partnership with Kemendagri	Collaboration Meeting	To invite scholars from Administrative Science of UI to collaborate in fulfilling requirements from joint research project with Internal Affairs Ministry	Traditional (Face to Face)	16-May-19	16-May-19	Depok	SMART CITY Office	3	2	5

No	Title of Activity	Type of Activity	Objective of Activity	Method of Activity	Date Start	Date End	Location	Venue	Actual		Total Participated Beneficiaries
									Male	Female	
13	Financial Support Prof. Dr. Heri Hermansyah, S. T., M. Eng. (DK-6)	Others	This conference not only provides a forum for chemistry related topics such as synthesis and technical aspects of chemistry and its products, but the broader context that is necessary to enable long term viable and globally applicable contribution of chemistry to the SDGS. in addition to presentation conference and workshop, there is also an exhibition that displays posters from participants who took part in the event. The conference aims to provide a forum for participants from academia and industry from authorities and other institution.	Traditional (Face to Face)	05-May-19	08-May-19	Germany	Hilton Dresden	1	0	1
14	Conference Subsidy Dr. Rico Januar S. SKM., M. Kes(Epid) (SK-5)	Conference	Scholars participate in the International Conference	Traditional (Face to Face)	01-May-19	02-Jun-19	Malaysia	Block N24, Universiti Teknologi Malaysia, Johor Bahru	1	0	1
15	Conference Subsidy Rini Mutahar, SKM., MKM. (SK-6)	-	Scholars participate in international conference	-	01-May-19	02-Jun-19	Malaysia	Block N24, Universiti Teknologi Malaysia, Johor Bahru	0	1	1

No	Title of Activity	Type of Activity	Objective of Activity	Method of Activity	Date Start	Date End	Location	Venue	Actual		Total Participated Beneficiaries
									Male	Female	
16	Conference Subsidy Diana Dewi Sartika, S. Sos., M. Si (SK-7)	Conference	Scholars participate in International Conference	Traditional (Face to Face)	01-May-19	01-May-19	Malaysia	Block N24, Universiti Teknologi Malaysia, Johor Bahru	0	1	1
17	Conference Subsidy Dr. Andy Alfatih, M. PA (SK-8)	Conference	Scholars participate in International Conference	Traditional (Face to Face)	01-May-19	02-May-19	Malaysia	Block N24, Universiti Teknologi Malaysia, Johor Bahru	0	1	1
18	Conference Subsidy Anita Rahmiwati, S. P., M. Si. (SK-9)	Conference	Scholars participate in International Conference	Traditional (Face to Face)	01-May-19	02-May-19	Malaysia	Block N24, Universiti Teknologi Malaysia, Johor Bahru	0	1	1
19	Collaborative Meeting on Lisence PT PGI and SMART CITY	Collaboration Meeting	To discuss collaboration clauses for research partnership establishment between PT PGI and SMART CITY	Traditional (Face to Face)	29-May-19	29-May-19	Depok	SMART CITY Office	3	3	6
Total Participated Beneficiaries on SMART CITY's Activities									101	70	171
Grand Total Participated Beneficiaires in CCRs' Activities									469	389	858

Total Beneficiaries During this Reporting Period were:

Centre of Collaboration Research	Male	Female	Total
Total Participated Beneficiaries on CDSR's Activities	99	59	158
Total Participated Beneficiaries on ANBIOCORE's Activities	2	0	2
Total Participated Beneficiaries on NCSTT's Activities	69	39	108
Total Participated Beneficiaries on ARI's Activities	198	221	419
Total Participated Beneficiaries on SMART CITY's Activities	101	70	171
Grand Total	469	389	858

Annex IV: SHERA's Media Coverage

No.	Date of News Article	Name of News Outlet	Title of Article	News Outlet (i.e., Newspaper, Online, Radio, TV)	URL for OnlineNews Articles	Language (English or Bahasa Indonesia)
1	01-Apr-19	Republika	Bus Listrik Transjakarta diklaim Tekan Biaya Operasional	Online	https://nasional.republika.co.id/berita/nasional/jabodetabek-nasional/ppa3mg366/bus-listrik-transjakarta-diklaim-tekan-biaya-operasional	Bahasa Indonesia
2	02-Apr-19	Kabar Faktual	Peneliti IPB: Kondisi Terumbu Karang Lombok Memprihatinkan	Online	https://www.kabarfaktual.com/2018/08/02/peneliti-ipb-kondisi-terumbu-karang-lombok-memprihatinkan/	Bahasa Indonesia
3	14-Apr-19	Biosains	Kunjungan ANBIOCORE ke Institut Biosains	Online	http://biosains.ub.ac.id/kunjungan-anbiocore-animal-biotechnology-and-coral-reef-research-ke-institut-biosains/	Bahasa Indonesia
4	15-Apr-19	Wartakota	Transjakarta Segera Uji Coba Penggunaan Bus Listrik di Jakarta	Online	https://wartakota.tribunnews.com/2019/04/15/transjakarta-segera-uji-coba-penggunaan-bus-listrik-di-jakarta	Bahasa Indonesia
5	26-Apr-19	JabarProv.go.id	Kunjungan Perwakilan USAID dan ANBIOCORE ke BPPIB Ciamis	Online	http://dkpp.jabarprov.go.id/kunjungan-perwakilan-usaid-dan-anbiocore-peneliti-ipb-dan-unpad-ke-bppib-tsp-ciamis/	Bahasa Indonesia
6	23-Apr-19	Radar Madura	Populasi Sapi Madura Harus Dijaga	Online	https://radarmadura.jawapos.com/read/2019/01/23/115395/populasi-sapi-madura-harus-dijaga	Bahasa Indonesia

7	01-Jun-19	Agronet	Terumbu Karang di Perairan Lombok Kritis	Online	http://www.agronet.co.id/index.php/detail/indeks/berita/2084-Terumbu-Karang-di-Perairan-Lombok-Kritis	Bahasa Indonesia
8	01-Jun-19	Antara	Peneliti IPB: Terumbu Karang Lombok Memprihatinkan	Online	https://megapolitan.antaranews.com/berita/42311/peneliti-ipb-terumbu-karang-lombok-memprihatinkan	Bahasa Indonesia
9	02-Jun-19	BPTU-HPTIndrapuri	Field Trip Training of Scientific Communication and Proposal Writing ANBIOCORE USAID SHERA	Online	http://bptu-hptindrapuri.com/site/index.php/headline/364-field-trip-trainnig-of-scientific-communication-and-proposal-writing-ambiocore-usaid-shera	Bahasa Indonesia
11		IIE	SHERA Program Director Reflects on IIE Summit 2019 and Bi-national Research Partnership Development	Online	https://www.iie.org/Learn/Blog/2019/07/SHERA-Program-Director-Reflects-on-IIE-Summit-2019-and-Bi-national-Research-Partnership-Development	English

Annex V: SHERA Success Stories

Rehabilitation of Former Gold Mine with Biodiesel-Producing Plants

Indonesia has around 24.3 million hectares of unproductive and critically-damaged land due to mining activities. These activities can change the physical, chemical, and biological conditions of the soil. The mine tailings, the ore waste of mines, are dense, less fertile, and are polluted with heavy chemicals that change the life of soil microbes. Soil condition can be improved, however, and it is critical to find soil restoration methods so the land does not continue to degrade but can instead be reused in the future. To combat the further destruction of these post-mining landscapes in Indonesia, one of the USAID SHERA Centers for Collaborative Research, the Center for the Development of a Sustainable Region (CDSR), has been conducting research to find innovative and sustainable solutions.

In his efforts to find soil restoration solutions for mine tailings, USAID SHERA researcher Muhammad Hilmi discovered that the plant *Reutealis trisperma* can be cultivated on gold mine tailings. Hilmi is a researcher from the Department of Biology at Institut Pertanian Bogor (IPB). His study observed the growth of *Reutealis trisperma* over three months in poly bags planted on gold mine tailings, in collaboration with PT. ANTAM in Pongkor, Bogor. The research revealed that *Reutealis trisperma* could survive in soils with high concentrations of waste. Although the plant's growth was slightly hampered compared to the other *Reutealis trisperma* growing in soils with low waste concentrations, it still survived.



Figure 17: Muhammad Hilmi planting the *Reutealis trisperma* in poly bags

The study, entitled, "Growth, histochemical and physiological responses of a *Reutealis trisperma* to gold mine tailings," was published in the journal Biodiversity, Volume 19, in 2018. Hilmi showed that *Reutealis trisperma* sustained growth under gold mine tailing conditions for 90 days at a 100% success rate, meaning the plants showed no symptoms of toxicity. This then suggests that this plant is tolerant to gold mine tailing. In addition to its hardiness, *Reutealis trisperma* can also be processed into biodiesel fuel because of its high oil content. Between its great potential for phytoremediation, the elimination of hazardous contamination with living plants, and becoming a renewable energy source, *Reutealis trisperma* could usher in a wave of new opportunities for land restoration in Indonesia thanks to the collaborative research of CDSR.



Figure 18: The researchers at the gold mine tailing site in Bogor

The Future of Transportation is Electric

Transportation is vital to daily life. It is not only important for citizen mobility, but also for distribution of goods and services. The transportation sector in Indonesia faces challenges including increased traffic, reliance on fossil fuels, and transportation safety. The USAID SHERA program is helping to address these challenges by supporting research collaboration between Indonesia and the United States to conduct joint research on sustainable transportation technology.

USAID SHERA is working with the National Center for Sustainable Transportation Technology (NCSTT), a Center for Collaborative Research that consists of partner members Institut Teknologi Bandung, Universitas Diponegoro, Universitas Sriwijaya, Universitas Lambung Mangkurat, Institut Teknologi Kalimantan, Universitas Sebelas Maret, Universitas Sam Ratulangi, and Massachusetts Institute of Technology. NCSTT research on transportation technology was recently showcased at a panel discussion that focused on USAID SHERA's role in shaping the science and technology environment in Indonesia and was held at the U.S. Embassy's cultural center, @america. During the panel discussion, two NCSTT researchers, Dr. Eng. Bentang Arief Budiman and Dr. Annisa Jusuf, shared solutions to Indonesia's transportation challenges.



Figure 12: Participants of the panel discussion on USAID SHERA's role in shaping the Indonesian science and technology environment held at @america, from left to right: Thomas Crehan - USAID Indonesia, Daud Joseph – Operational Director, Transjakarta, Bentang Arief Budiman - NCSTT Partnership Manager/Researcher, M. Risyad Tabattala - Enterprise Partnership Manager Go-Jek, Annisa Jusuf - NCSTT Researcher, Prima Setiawan – SHERA Program Director, Windie Nababan – Kemristekdikti, Agung Wicaksono – Director, Transjakarta, Esther Manurung – USAID Indonesia, Diana Kartika Jahja – IIEF Director, and David Simpson, Director, USAID Programs – IIE.

During this panel discussion, Dr. Budiman discussed the importance of sustainable transportation technology. For example, Dr. Budiman explained that the demand for fossil fuels can be reduced by innovative transportation solutions, such as electric vehicles. “No one can hold back the transport revolution, especially in urban cities,” he said. Currently, NCSTT is developing several electric vehicles including the “electric trike,” “electric bus,” and “light rapid transit” or train. Furthermore, Dr. Budiman feels that virtual product development, using software to simulate design, will become the norm in the automotive industry to test vehicle safety while reducing the time and costs required to develop prototypes.

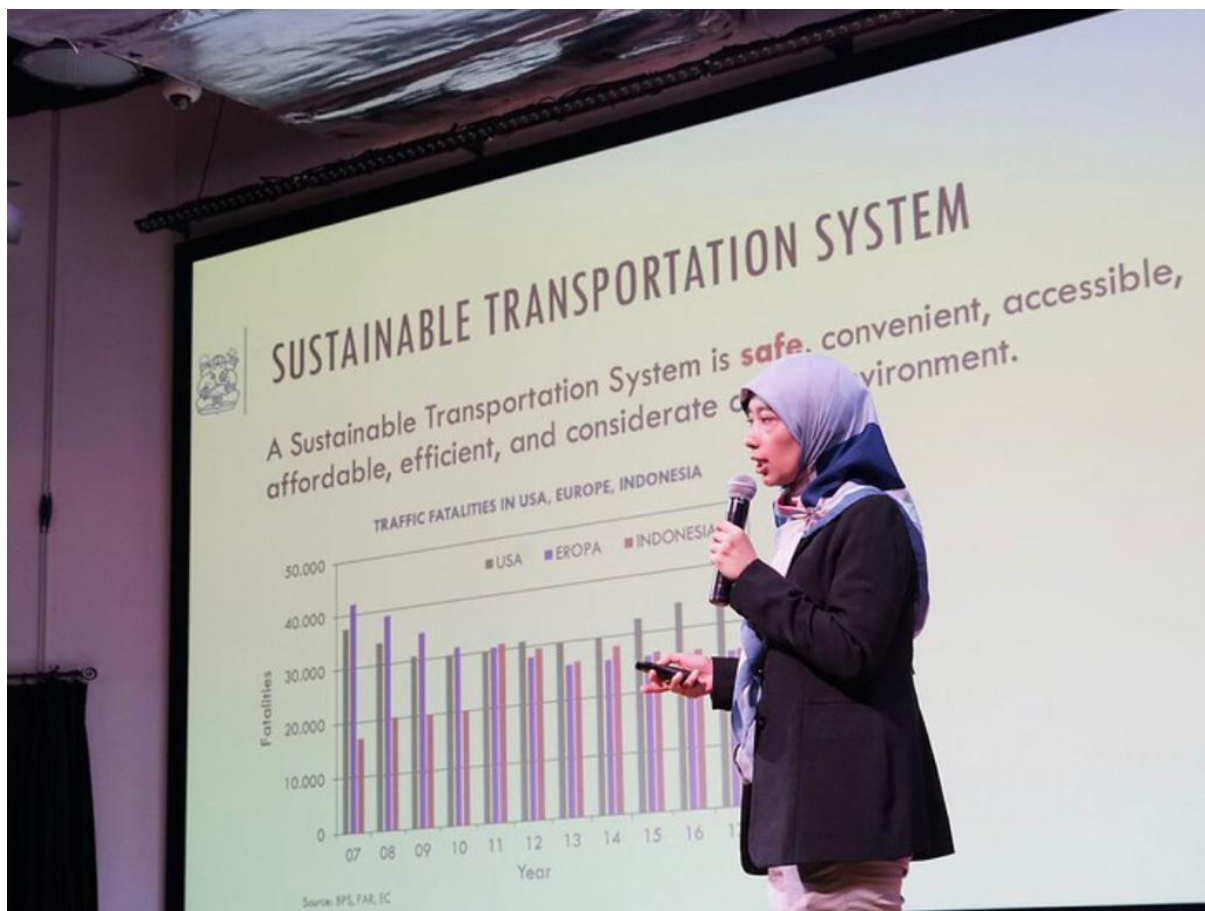


Figure 13: Dr. Annisa Jusuf shares data on transportation accidents in Indonesia

Furthermore, Dr. Jusuf discussed challenges with transportation safety and shared that the best vehicle is one that can absorb energy during accidents and protect passengers from injury or fatality. “Your car is built to crumple!” explained Dr. Jusuf. The crumple zone absorbs accident impact to help reduce personal injury. Based on NCSTT’s data from 2017, most accidents are sustained by motorcyclists, with a total of 110,000 incidents recorded. NCSTT concluded that motor vehicle volume and motorcyclist behavior are often to blame for high traffic accidents in Indonesia. Dr. Jusuf explained that there are at least eight common driver habits that can lead to higher incidents of accidents, including: Not slowing for yellow traffic lights, driving against traffic flow, turning left from undesignated turn lanes, not stopping at pedestrian crossings, stopping on the side of the road, speeding, driving while fatigued, and distracted driving.

NCSTT is also collaborating with PT. Transportasi Jakarta (Transjakarta) for the development of an electric bus. Transjakarta’s representatives, Daud Joseph, Operational Director, agreed on the importance of public transportation to accommodate public needs. “Citizens deserve safe, convenient, and affordable public transportation,” said Joseph. The public’s increasing needs for diverse transportation options encouraged Transjakarta to collaborate with NCSTT to develop electric buses that will help reduce pollution by omitting no carbon dioxide and provide a more economic transportation option for the public due to reduced maintenance costs. A trial of these buses will be conducted in November 2019.

As discussed at the panel discussion hosted by @america, the electric transportation solutions NCSTT is developing offer more environmentally friendly and economic options for the public and are helping to shape

Algae Wall, The Future of Green Building

Did you know that commercial buildings are responsible for 40% of global energy consumption? Air conditioning, televisions, computers, and other electric devices consume most of this energy. To reduce energy consumption, USAID SHERA researchers from the Faculty of Architecture at the Institut Teknologi Bandung (ITB), Dr. Donny Kurniawan and Nissa Aulia Ardiani, are developing an algae façade for commercial buildings. By growing algae vertically along the sides of buildings, Dr. Donny and Ardiani aim to reduce energy consumption and air pollution, benefitting the environment and surrounding community. Dr. Donny and Ardiani are planning to develop and implement an algae façade on a building in the ITB Innovation Park, Bandung, that is modeled after a similar building developed in Germany named BIQ House.

Dr. Eko Agus Suyono, an algae expert from the Center for the Development of a Sustainable Region (CDSR) at Universitas Gadjah Mada (UGM) introduced research on algae to ITB during their collaboration with SHERA as a Center for Collaborative Research (CCR). The research consortium explored the process of focusing sunlight on algae chlorella to optimize the algae's photosynthesis and growth. The research team now plans to grow the algae vertically to cover the exterior of a building. During photosynthesis, the algae absorbs carbon dioxide and produces oxygen. The research team plans to develop a system to distribute this oxygen inside the building, improving air quality. The increased oxygen levels also improve indoor air circulation and reduce the need for air conditioning, reducing energy consumption. Additionally, after a week of growth, the algae can be harvested and processed to be used as an energy source, called biomass, that may be used by the local community.

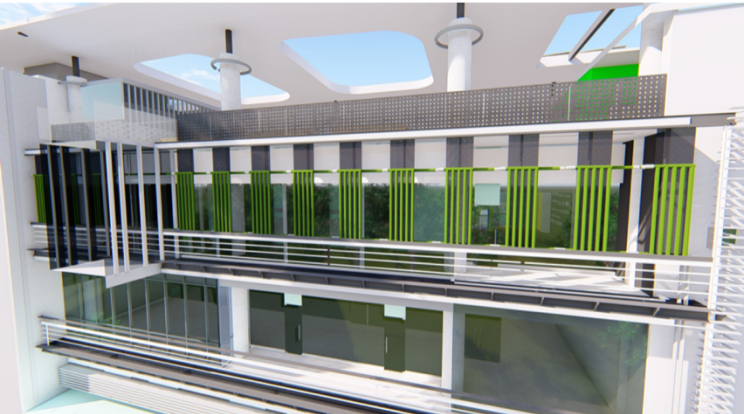


Figure 19: Simulation of algae façade on a building at the ITB

Another consortium member based in the U.S., University of Colorado, Boulder (UCB), provided computational and simulation assistance to Dr. Kurniawan and Ardiani, including software to calculate energy consumption of a specific device or building and software to develop an animated simulation of the building design. UCB also provided access to complex weather data to help forecast energy consumption in terms of air conditioning or heating use by buildings, and available sunlight for algae photosynthesis. “It was very hard to collect detailed hourly weather data in Indonesia. However, our partnership with UCB has resulted in this access,” shared Ardiani. The team also had the opportunity to utilize UCB’s advanced research lab through this collaboration.

The Challenges of Algae Wall

The team is still working on the best design to implement an algae façade. Attaching algae to the wall will increase the building weight which poses some engineering challenges. Algae also requires proper water and nutrition. With these challenges in mind, the team is developing a strong, leakproof design that also receives enough sunlight to support algae growth. “Currently, we are experimenting [with] the best solution to overcome this challenge,” explained Ardiani.

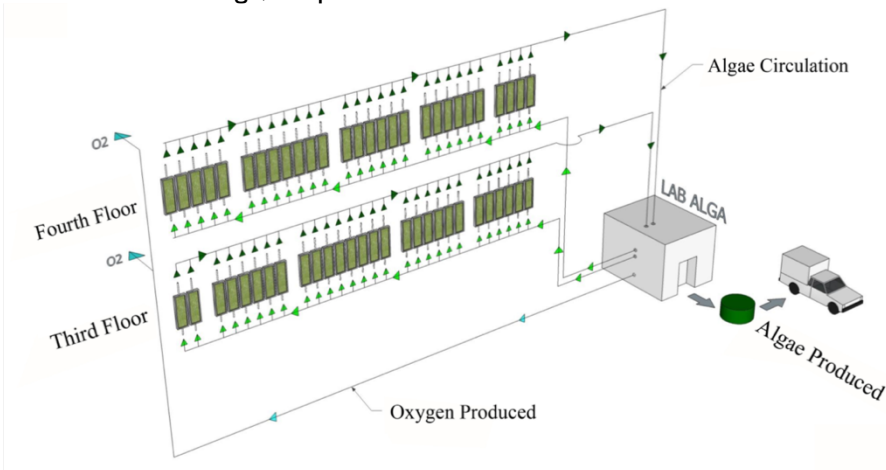


Figure 20: Simulation of the algae façade system

Why Green Building?

By reducing energy consumption and improving air quality, green building is beneficial to both the environment and the local community.

Solar-Powered Tap Saves Liters

Twenty-four percent of the world's population is Muslim. Within the Islamic practice, Muslims conduct the daily act of ablution, the process of washing the face, hands, and feet in advance of worship, up to five times per day. This is typically done using flowing water from a tap. In doing so, communities face the modern challenge of conserving water while conducting ablution.

To help address this challenge, USAID SHERA Center for Collaborative Research (CCR), the Center for Development of Sustainable Region (CDSR), led by Universitas Gadjah Mada (UGM) and in partnership with a research team with Universitas Muhammadiyah Gorontalo (UMGo), is developing a prototype of a solar-powered faucet for more efficient water flow during ablution. This faucet utilizes solar power from a 10-Watt photovoltaic (PV) and a 12-Volt battery to activate a sensor that can detect an individual up to 20 inches away from the faucet. This research directly correlates to CDSR's focus research area of environment, energy, and maritime sciences.



Figure 21: The prototype (green) being used for ablution

The solar-powered sensor sends "on" and "off" signals to activate the faucet valves that control water flow, allowing water to flow only when needed. Additionally, the valve does not require activation by the user – the sensor automatically turns the water on when a person is present and turns off when a person is not present. In comparison to the conventional tap used for ablution, this prototype saves approximately 2 liters for every 50 seconds of use.

UMGo is currently working towards publishing this research in the Asia Conference on Power and Electrical Engineering (ACPEE) journal as a scientific paper titled, "A Prototype of Solar-Powered Automatic Freedom Tap." This paper was presented by researcher Risman Jaya at the 4th ACPEE, held March 26-30, 2019. Risman noted that this research enabled him to attend his first international scientific conference and shared, "In this event, I was involved in knowledge sharing with other researchers from all over the world, especially on energy and technology issues." The solar-powered faucet prototype developed by CDSR has been installed and is in use at a local Indonesian mosque.

SMART Land Surveillance System for Local Cities

Monitoring urban city dynamics is a challenge faced by almost every city in Indonesia. Controlling land development is very tricky because government regulations may collide with the people's needs. The USAID SHERA Centre for Collaborative Research (CCR) that works on urban planning and development research, Scientific Modelling Application Research and Training for City Centered Innovation and Technology (SMART CITY), is working on a prototype to overcome this problem.

SMART CITY's Feasibility Study team (FS) from the ICT & Mobility cluster collaborated with PT. Pangripta Geomatika Indonesia (PT PGI) and Depok City Regional Financial Office (BKD Kota Depok) to establish the 'Smart Land Surveillance System' prototype in Depok City. The goal is to establish a surveillance system to support the local government in controlling and monitoring land development by comparing existing building volume with regulating Urban Design Guidelines (UDGL).

PT PGI provides 3-Dimensional (3D data of existing buildings by using a drone to sweep over areas permitted by Depok City government to be used for the prototype trial. Depok City Regional Financial Office will provide existing UDGL to be compared later on with the existing condition. The FS team will create the framework to input the 3D data and UDGL, to detect any misappropriation of the UDGL after building construction stage, which will apply to the government taxing system. It can also become a long-distance monitoring method for building construction to come.

City governments have yet to build a surveillance system for land development. The step of building construction usually starts from owners submitting a proposal to local government and a surveyor will then go and check the actual site to confirm it. If confirmed, the government will issue the Building Construction Permit and the owner can start the construction. Many users misuse the permit and construct a building which is different from what they proposed, and this issue becomes a problem in regional land development. Unfortunately, most governments do not have enough man power and efficient cost to monitor these developments.

The prototype is expected to establish a long-distance surveillance system, which will be used by government personnel to reinforce better land development. It is also expected to become a sustainable method for land development in Indonesian cities to increase governmental readiness for Smart City development, starting with Depok City. This system will be integrated with the government's existing one and will be operated by their personnel.

Previously, local governments did not have enough man power and funds to pay for on-site surveyors. This prototype will be a cost-effective and long-distance monitoring system supported with sustainable technology for land surveillance. Currently, the prototype is in finalization process, where SMART CITY is developing the program system and finalization of data framework by the FS team. PT. PGI is also on the final stage of gathering existing building data, with Regional Financial Office.

Participants from PT PGI have contributed to the collection of real existing data, while the FS team from the ICT and the Mobility cluster have created the program framework. The Regional Financial Office also provided the UDGL data of permitted areas in accordance with the project's Collaboration Agreement.